Laboratory Practices in

Agricultural Education

AEC 4228/5227

Fall 2025 – 3 credits

(Sections 5614/19J5)

# Instructors

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| Carla B. Jagger, PhDAssistant Professor 307B Rolfs Hallcarlajagger@ufl.edu**Office Hours**: By appointment (email to schedule)  |  | Jenn Morgenthaljhoney@ufl.edu **Office Hours**:By appointment  |

# Class Time and Location

Wednesday: Periods 6 – 8 (12:50 – 3:50 pm) Rolfs Hall 306 or designated time & location (see schedule)

# 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 Objectives & Essential Questions

At the completion of the course, the learner will be able to:

1. Assess the role of laboratory integration in agricultural education.
2. Properly design and manage student agriscience instruction.
3. Develop a system by which to evaluate agriscience laboratory activities and projects.
4. Develop and implement an agriscience laboratory safety instructional program.

# Course Design

This course is designed as an in-person application-based approach. Students will be asked to design facility plans through a portfolio and deliver other educational programming in performance assessments throughout the semester to apply what they learned from the lecture/discussion format.

# Requirements

Any required readings will be made available on Canvas prior to the class session.

## Technology:

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

* Desktop Computer or Laptop
* Audio Capabilities
* Webcam and Microphone for synchronous sessions
* Microsoft Word - [Microsoft 365 basics video training](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fsupport.microsoft.com%2Fen-us%2Foffice%2Fmicrosoft-365-basics-video-training-396b8d9e-e118-42d0-8a0d-87d1f2f055fb&data=05%7C01%7Cbrooke.brammer%40ufl.edu%7Cfa687a99f8814d9457ff08db03a74f10%7C0d4da0f84a314d76ace60a62331e1b84%7C0%7C0%7C638107789339169026%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=TLW6NUAxqahJlebtSJzmI6gGZFi5bvKksQmj7nOsgPA%3D&reserved=0)
* Adobe Reader - [Acrobat tutorials](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fhelpx.adobe.com%2Facrobat%2Ftutorials.html&data=05%7C01%7Cbrooke.brammer%40ufl.edu%7Cfa687a99f8814d9457ff08db03a74f10%7C0d4da0f84a314d76ace60a62331e1b84%7C0%7C0%7C638107789339169026%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=hZA7%2FIKCV%2BzbSPu2MjomDnxCbI5usbBdV2%2FMV9lzRso%3D&reserved=0)
* Zoom - [Zoom Privacy Policy](https://explore.zoom.us/en/privacy/)
* 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://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fcommunity.canvaslms.com%2Ft5%2FStudent-Guide%2Ftkb-p%2Fstudent&data=05%7C01%7Cbrooke.brammer%40ufl.edu%7Cfa687a99f8814d9457ff08db03a74f10%7C0d4da0f84a314d76ace60a62331e1b84%7C0%7C0%7C638107789339325259%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=584OMZNA3VDOhfbJir6w2cQXUz118ncUvLFwjg063fw%3D&reserved=0) is provided if you have additional questions.
* View [Canvas Privacy Policy](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.canvaslms.com%2Fpolicies%2Fprivacy&data=05%7C01%7Cbrooke.brammer%40ufl.edu%7Cfa687a99f8814d9457ff08db03a74f10%7C0d4da0f84a314d76ace60a62331e1b84%7C0%7C0%7C638107789339325259%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=MZOYIJ9jHRaqebfqNW15YE%2F6T%2Biy6S6znresFJaVMrQ%3D&reserved=0)
* **Web Browser - Chrome** is the preferred browser for Canvas. If you do not have Chrome, you can [download it.](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.google.com%2Furl%3Fsa%3Dt%26rct%3Dj%26q%3D%26esrc%3Ds%26source%3Dweb%26cd%3D2%26cad%3Drja%26uact%3D8%26sqi%3D2%26ved%3D0CDYQjBAwAQ%26url%3Dhttps%253A%252F%252Fsupport.google.com%252Fchrome%252Fanswer%252F95346%253Fhl%253Den%26ei%3D16T0U_61AZWAygT1vYHoAQ%26usg%3DAFQjCNHFiowHAaPSkTUo-EyAOIeZWDPSCw%26sig2%3DulcujkhFWJawLyO6J0SvpA%26bvm%3Dbv.73231344%2Cd.aWw&data=05%7C01%7Cbrooke.brammer%40ufl.edu%7Cfa687a99f8814d9457ff08db03a74f10%7C0d4da0f84a314d76ace60a62331e1b84%7C0%7C0%7C638107789339325259%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=NJn3IJOjWwtZLgxmHrwwCiuh0EKyquERtWcT9Vs%2FKus%3D&reserved=0)
* University of Florida Email
* Students are expected to check their my.ufl emails daily. View the [Student Computing Requirements](https://it.ufl.edu/policies/student-computing-requirements/) page for information on technology requirements and expectations.

## Prerequisite Knowledge:

Junior standing or higher

## Minimum Technical Skills:

Minimum technical 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.
* Ability to perform online research using a variety of search engines and library databases.

# Instructor Response & Feedback

The instructor is committed to responding to your Canvas and email messages **within 48 hours** when feasible during the work week, Monday through Friday, except holidays. You can also meet with me via Zoom by emailing for an appointment; links provided in the Contact section above. The major assignments will be graded, with meaningful feedback provided, **within one week of their submission.**

# Assignment Explanation & Points:

**Laboratory Reflections**

Following each session, you will be required to complete a half-page **reflection** using the provided prompts that is **due before class the following week**, submitted through Canvas. No work will be accepted past the deadline nor will students absent be able to make up the reflection assignment.

Reflections should account for the following: how information gathered during the class session/laboratory visit can be used within your classroom instruction/curriculum, SAE, and FFA. [Course Objectives: 1, 3]

**Field Observation Hours (Ag Ed Symposium)**

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 November 1st. Following the program visits/symposium event, a written reflection (1-2 pages) should be completed and submitted via Canvas using the prompts provided. [Course Objective: 1]

**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 deadlines. Assignments will have feedback provided as they are turned in with the final products to consist of all the assignments assembled in portfolio format. Please see the rubrics for individual requirements, deadlines, and grading. [Course Objectives: 2 – 4]

**Laboratory Lesson Plans and Presentations**

Each student will select two predetermined laboratory topics and prepare lesson materials (lesson introduction, laboratory instruction, and evaluation). Using your developed lesson, each student will teach the laboratory instructional moments lasting approximately 20 minutes to your peers. These instructional moments should include time for students to complete your lab at least partially [Course Objectives: 2, 3]

**Final Laboratory Practicum**

All students will participate in a final, written practicum where you 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. [Course Objectives: 1 – 4]

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| **Assignment** | **Points** | **Due Dates** |
| Weekly Reflections (11 @ 20 pts each/lowest score dropped)  | 200 | Weekly |
| Field Observation Hours (Ag Ed Symposium) | 50 | November 15th |
| Facility Proposal - Individual Drafts | 40 | See Schedule |
| Facility Proposal - Final Submission | 410 | December 11th  |
| Laboratory Lesson Plan | 100 | See Schedule  |
| Laboratory Teaching Presentation | 150 | See Schedule  |
| Final Laboratory Practicum | 50 | December 6th  |

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| Grading Scale |
| A = 930 - 1000 | B+ = 870 - 899 | C+ = 770 - 799 | D+ = 670 - 699 | E = 0 - 599 |
| 1. = 900 - 929
 | B = 830 - 869 | C = 730 - 769 | D = 630 - 669 |  |
|  | 1. = 800 - 829
 | 1. = 700 - 729
 | 1. = 600 - 629
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Further information about UF grading policies can be found here:

<https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

## Reading & Assignment Schedule (tentative locations all subject to change):

| **Class Meeting Date** | **Topic** | **Location** | **Item(s) Due** |
| --- | --- | --- | --- |
| August 27 | Purposes & Planning of Laboratory Instruction | Rolfs Hall 306 |  |
| September 3 | Nature of Lab Instruction  | Rolfs Hall 306 | * 8/27 Reflection
 |
| September 10 | Facility Layout and Design with Laboratory Safety  | Rolfs Hall 306  | * 9/3 Reflection
 |
| September 17 | Agricultural Mechanics Laboratory Planning | Rolfs Hall 306 | * 9/10 Reflection
 |
| September 18 – 20: **9th Annual** **Agriscience Teacher Education Symposium**; Reflections will be done and count towards your field experience hours assignment; Block off these dates and work with other courses |
| September 24 | Ag in the Classroom Resources * Jenn Morgenthal & Becky Sponholtz
 | Rolfs 306 | * 9/17 Reflection
* Grading Tool DRAFT
* Student Jobs DRAFT
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| October 1 | Livestock Facilities & Animal Handling* Santa Fe High School
 | Santa Fe H.S.(1:30 – 3:30pm) | * 9/24 Reflection
* Lesson Plan DRAFT
 |
| October 8 | Teaching Presentations (5 students) | Rolfs Hall 306 | * 10/1 Reflection
* Calendar DRAFT
 |
| October 15 |  Entomology* UF Bee Lab
* Entomology & Nematology
 | Bee Lab (1:00-3:00 pm) | * Tools and Equipment DRAFT
* Distribution of Materials DRAFT
 |
| October 22 | CTE Panel & Laws/Liability* Jessica Anderson & Kelli Kennedy
 | Rolfs Hall 306  | * 10/15 Reflection
* Facility drawings DRAFT
 |
| October 29 | Vet Assisting or Aquaculture* Discussion Board
 | Virtual Lab- Asynchronous | * 10/22 Reflection
* Emergency Plan DRAFT
 |
| November 5 | Teaching Presentations (4 Students) | Rolfs Hall 306  | * Narrative Explanation DRAFT
 |
| November 12 | Aquaculture * Center for Aquatic and Invasive Plants
 | CAIP (1-3:30 pm) | * Field Observation Hours
 |
| November 19 | School and Community Gardens * Kelli Brew
 | Field and Fork Gardens  | * 11/12 Reflection
 |
| November 26 | Thanksgiving Break Holiday | No Class  | * 11/19 Reflection
 |
| December 3 | Final Design Practicum• Reflective Practice | Online Quiz | **Due by December 6th:*** Final Facility Proposal
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# University-wide Policies and Student Support Services

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

# 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 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  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.    |

The FEAPs can be accessed here: [https://www.fldoe.org/teaching/professional-dev/the-fl-educator-accomplished-practices.stml](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.fldoe.org%2Fteaching%2Fprofessional-dev%2Fthe-fl-educator-accomplished-practices.stml&data=05%7C02%7Ccarlajagger%40ufl.edu%7C00c55651375940cd217008ddd8e89fdb%7C0d4da0f84a314d76ace60a62331e1b84%7C0%7C0%7C638905215820623248%7CUnknown%7CTWFpbGZsb3d8eyJFbXB0eU1hcGkiOnRydWUsIlYiOiIwLjAuMDAwMCIsIlAiOiJXaW4zMiIsIkFOIjoiTWFpbCIsIldUIjoyfQ%3D%3D%7C0%7C%7C%7C&sdata=OiHot7%2B3ZJ5jKip3b4%2FtCzPbELDDINqtNktCYa1QeoM%3D&reserved=0)

FEAPs Assessed in this course

1f. 2a. 3e.