

AOM4455
AGRICULTURAL OPERATIONS AND SYSTEMS
SPRING 2026
IN-PERSON

1. Catalog Description: *3 credits.* Quantitative and managerial techniques for management and planning of technical resources in agriculture. Agricultural production and processing are viewed as systems, and system management and optimization tools are reviewed and applied. Applications of queuing theory, project scheduling, optimization and expert decision systems, linear programming, data and risk analysis are presented.

2. Instructors:

- a. Dr. Adam Watson
- b. Office location: 113 Frazier Rogers Hall
- c. Telephone: 352-294-6740
- d. Email address: jaw7385@ufl.edu
- e. Course site: Canvas e-Learning
- f. Office hours: MWF 1:55pm – 3:50pm or by appointment

- a. Dr. Gopal Kakani
- b. Office location: 263 Frazier Rogers Hall
- c. Telephone: 352-294-6746
- d. Email address: vgkakani@ufl.edu
- e. Course site: Canvas e-Learning
- f. Office hours: MW 2:00pm – 3:00pm or by appointment

- a. Dr. Clyde Fraisse
- b. Office location: 271 Frazier Rogers Hall
- c. Telephone: 352-249-6742
- d. Email address: cfraisse@ufl.edu
- e. Course site: Canvas e-Learning
- f. Office hours: MW 2:00pm – 3:00pm or by appointment

Your professors have an open-door policy, so do not hesitate to stop by their offices. If they are not in their office, please email them and they will respond shortly. **IMPORTANT:** When contacting your professors or teaching assistant, please allow up to 48 hours for a response, not including weekends or holidays.

3. Teaching Assistant

- a. Serenity Wilcox
- b. Course site: Canvas e-Learning
- c. Office hours: By appointment

4. Meeting Times: MWF 4th Period (10:40am – 11:30am)

5. **Meeting Location:** 110 Frazier Rogers Hall.

6. **Pre-requisites:** MAC1147 or MAC1114 & MAC1140 or MAC2233 & CGS2531

7. **Course Objectives:**

Students, upon completing this course, will be able to:

- a. Apply business management principles to analyze systems issues in agricultural operations.
- b. Solve optimization problems using mathematical and statistical techniques
- c. Provide both theoretical knowledge and practical skills and prepare to engage with and contribute to the growing field of carbon credits and climate change mitigation.
- d. Integrate climate and weather factors into risk assessments of production agriculture

8. **Material and Supply Fees:** None

9. **Textbook, Technology and Software Required**

- Computer, tablet, or phone with internet access browser (e.g., Chrome, Edge, Safari, Firefox) brought to class to participate in class activities and lectures.
- Microsoft Office 365 (free for UF students)
- Cloud Storage Software
- Google Drive, Dropbox, MS TEAMS)
- In addition, students should review the following to prepare them for using Excel:
<https://www.lynda.com/Excel-tutorials/Excel-Quick-Tips/530432-2.html?org=ufl.edu>

10. **Recommended Reading:**

None

11. **Course Schedule of Activities**

Weeks	Modules & Lecture Dates	Assignments & Due Dates
1	Module 1: Cost of Ownership and Time Value of Money Introducton (1/12); M1L1 (1/14); M1L2 (1/16)	Q1 - Watson (1/17); Participation 1 - Watson (1/18)
2	Module 2: Depreciation MLK Holiday (1/19); M2L1 (1/21); M2L2 (1/23)	Q2 - Watson (1/24); Participation 2 - Watson (1/25)
3	Module 3: Linear Programming Activity (1/26); M3L1 (1/28); M3L2 (1/31)	HW1 - Watson (1/28); Q3 (1/31); Participation 3 - Watson (2/1)

4	Module 4: Output Decisions of Agribusiness and Operations Systems M4L1 (2/2); M4L2 (2/4); Activity (2/6)	Q4 - Watson (2/7); Participation 4 - Watson (2/8)
5	Module 5: System Reliability and Risk M5L1 (2/9); M5L2 (2/11)	HW2 - Watson (2/11); Q5 - Watson (2/14); Participation 5 - Watson (2/15)
6	Module 6: Introduction to Carbon Credits & Scientific Basis M6L1 (2/16); M6L2 (2/18); M6L3 (2/20)	Q6 - Kakani (2/16); HW3 - Kakani (2/23); Participation 6 - Kakani (2/21); Q7 - Kakani (2/22);
7	Module 7: Policies, Regulations, Markets, and Trading M7L1 (2/23); M7L2 (2/25); M7L3 (2/27)	Q8 - Kakani (2/23); Participation 7 - Kakani (2/27) Q9 - Kakani (2/28)
8	Module 8: Social and Environmental Impacts and Future Trends M8L1 (3/2); M8L2 (3/4); M8L3 (3/6)	Q10 - Kakani (3/2); Participation 8 - Kakani (3/6) Q11 - Kakani (3/7)
9	Module 9: Project Development and Exercises M9L1 (3/9); M9L2 (3/11); M9L3 (3/13)	Q12 - Kakani (3/9); HW4 - Kakani (3/23) Participation 9 - Kakani (3/13) Q13 - Kakani (3/13)
10	Spring Break No class	
11	Module 10: Climate Risk in Agriculture M10L1 (3/23); M10L2 (3/25); M10L3 (3/27)	
12	Module 11: Florida's Climate and Drivers of Climate Variability in the Southeast USA M11L1 (3/30); M11L2 (4/1); M11L3 (4/3)	HW5 - Fraise (4/3)
13	Module 12: AgroClimate Indices for Crop Management M12L1 (4/6), M12L2 (4/8) Module 13: Crop and Disease Modeling Applications M13L1 (4/10)	HW6 - Fraise (4/10)
14	Module 13: Crop and Disease Modeling Applications M13L2 (4/12) Module 14: Climate Change and Agriculture (If time permits) M14L1 (4/15)	HW7 - Fraise (4/15); Presentations and Reports (4/22)

12. Course Expectations: To be successful in this course, attendance (on time) is important. It is the student's responsibility to contact the instructor(s) in advance of any planned absences, and to make arrangements to make-up and complete assignments. All assignments must be typed and are due one week from when assigned. Assignments must be submitted via Canvas by 11:59 PM of due date. Assignments submitted late, but before 5:00 PM on the day following the due date, will be marked down 10 points. Assignments returned late, before 5:00 PM on the second day following the due date will be marked down 50 points. No assignments will be accepted after 5:00 PM on the third day following the due date

Our class sessions may be recorded (audio and video) for students in the class to refer back and for remote students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

13. Grading Policy

Course grading is consistent with [UF grading policies](#).

14. Grades and Grade Points

	Points	% of Final Grade
Watson		
Participation 5 @ 5 pts. each	25	
Quizzes 5 @ 15 pts. each	75	
Homework 2 @ 75 pts. each	150	
Watson Portion Total Points	250	25%
Kakani		
Participation 4 @ 5 pts. each	20	
Quizzes 8 @ 10 pts. each	80	
Homework 2 @ 75 pts. each	150	
Kakani Portion Total Points	250	25%
Fraise		
Participation 1 @ 25 pts.	25	
Homework 3 @ 75 pts. each	225	
Fraise Portion Total Points	250	25%
Project	250	25%
TOTAL	1000	100%

Students who have questions about their grades should contact their professor. Do not contact the TA about grades.

15. Grading Scale

A	[100.00 – 93.00%]
A-	[92.99 – 90.00%]
B+	[89.99 – 87.00%]
B	[86.99 – 83.00%]
B-	[82.99 – 80.00%]
C+	[79.99 – 77.00%]
C	[76.99 – 73.00%]
C-	[72.99 – 70.00%]
D+	[69.99 – 67.00%]
D	[66.99 – 63.00%]
D-	[62.99 – 60.00%]
E	[59.99 – 0.00%]

11 Academic Policies and Resources

Academic policies for this course are consistent with university policies. See <https://syllabus.ufl.edu/syllabus-policy/uf-syllabus-policy-links/>

12 Campus Health and Wellness Resources

Visit <https://one.uf.edu/whole-gator/topics> for resources that are designed to help you thrive physically, mentally, and emotionally at UF.

Please contact [UMatterWeCare](#) for additional and immediate support.

13 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.

14 Privacy and Accessibility Policies

- Instructure (Canvas)
 - [Instructure Privacy Policy](#)
 - [Instructure Accessibility](#)
- Zoom
 - [Zoom Privacy Policy](#)
 - [Zoom Accessibility](#)