

FOS4222L FOOD MICROBIOLOGY LABORATORY

Spring, 2026

Course Format: In-person

MW, 1:00 pm-3:50 pm

Location: [FSN0310](#)

Instructor

Dr. Naim Montazeri

Room 341A, FSHN Bldg

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Website: <https://fshn.ifas.ufl.edu/about/faculty-bio-pages/montazeri/>

Office Hours: **Tuesdays 1-2 pm**. Highly recommended to make an appointment in advance, as my availability may vary.

Teaching Assistant

Philip Junior Yeboah, FSHN, Ph.D. student.

philipjuniyeboah@ufl.edu

Office hours: Office hours by appointment only.

Course Description

This course equips students with practical skills in food microbiology. A wide range of methods in isolating, characterizing, and enumerating microorganisms will be applied to food and environmental samples. This is a stand-alone course that is offered along with Food Microbiology (FOS4222) and Principles in Food Microbiology (FOS5225C).

Course Learning Objectives

1. Recognize the most common foodborne pathogens and differentiate their specific growth conditions.
2. Assess the microbial spoilage of food products during storage.
3. Detect, quantify, and characterize hazardous microorganisms in water and food.
4. Identify desirable microorganisms and their effects in preservation and fermentation.
5. Evaluate the efficacy of mitigation strategies against foodborne pathogens.

Course Prerequisites

MCB2000, MCB3023, or permission of instructor.

Course format

Prior to the lab

- Students are expected to review each laboratory practice manual before attending each session. The lab may start with pop quizzes with bonus points.

During the lab

- **Attend the class by 12:50 pm to settle. The lab starts at 1:00 pm.**
- Do not come to the lab if you have a contagious illness or flu-like symptoms. In case of an illness, a doctor's note to be provided if missing a class activity.
- Leave all extra books and bags in the space provided in the back of the lab.
- Sanitize work area before and after you complete your work with a fresh 10% bleach solution or 70% ethanol.
- Put on your lab coat, gloves, and safety goggles before the lab starts.
- Perform the laboratory work in an organized and careful manner. Record all data, calculations, and other relevant information in your notebook.
- It is mandatory that students always wear a lab coat, as well as safety glasses and mask when working with liquid material that could be aerosolized.
- You are working with living organisms. Treat all microbial cultures as they are human pathogens.
- Some lab exercises will require you to come in outside of the normal laboratory class hours to complete subsequent steps of an experiment and/or record results.

In case of any incident or injury, immediately report it the teaching assistant and the instructor.

Presentations and Reports

Follow the guidelines provided in Canvas.

Textbooks, Learning Materials, and Supply Fees

Adams, Martin R. Moss, Maurice O. McClure, Peter J. (2016). *Food Microbiology (4th Edition)*. Royal Society of Chemistry. <https://app.knovel.com/hotlink/toc/id:kpFME00042/food-microbiology-4th/food-microbiology-4th>. Full text is freely available to the UF students through Knovel.com (use your UF email address to sign up).

Technical skills

To complete your tasks in this course, you will need a basic understanding of how to operate a computer, and how to use basic software. The University of Florida expects students entering an online program to acquire computer hardware and software appropriate to his or her degree program. Most computers are capable of meeting the following general requirements. A student's computer configuration should include:

- Webcam; Microphone; Speakers or headphones; Broadband connection to the Internet and related equipment (Cable/DSL modem) for office hours.
- Your instructor might request that you obtain the [iClicker Cloud](#) (free for students) to respond to polls and in-class quizzes.
- Microsoft Office Suite installed (provided by the university)

Individual colleges may have additional requirements or recommendations, which students should review prior to the start of their program.

Communication Guidelines

- Course materials and announcements will be on Canvas. Check regularly and enable notifications (click [here](#) for a step-by-step guide).
- For communicating with the instructor, please use Canvas messages only. For instructions, click [here](#).

Class Demeanor/Expectations

- Refrain from attending the class if you have a contagious illness or flu-related symptoms. In case of an illness, a doctor's note is to be provided if missing a class activity.
- Attendance and in-class participation together account for 10% of the final course grade. To be eligible for any attendance/participation credits. This allows for up to 4 absences without penalty. Attendance beyond the minimum threshold contributes proportionally to the attendance/participation score. Credit is based on both presence and active participation during class.
- Please refrain from checking or sending e-mails, texts, etc during class or lab sessions.
- Students anticipating an absence must notify the instructor at least 8 hours in advance and provide valid documentation (e.g., a medical note, military service notice, or university event notice) prior to the absence. In cases of emergencies, documentation must be submitted within 48 hours after the missed session.
- Makeup exams will only be given with the permission of the instructor if adequate notice and documentation (such as a doctor's note) are provided in advance (at least 8 hours prior to the exam). Requirements for make-up exams, assignments, and other work in this course are consistent with university policies that can be found at catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/
- Assignments must be submitted through Canvas as a text entry or Word/PDF file (no email submissions will be accepted)
- Late assignment/report submittal: A 10% pt penalty per day will be assigned for late assignments or reports turned in within two days after the due date. No submission will be accepted after two days past the due date.
- As a portion of class materials will be delivered online, you are responsible for observing all posted due dates and are encouraged to be self-directed and take responsibility for your learning.
- Students who miss a lab session are responsible for obtaining notes and data from their team members and contributing to the group lab report. Failure to contribute meaningfully to the lab report, regardless of attendance, will result in zero points for that report.

- Our class sessions may be audio/visually recorded for educational purposes. **As in all courses, unauthorized sharing of class materials is prohibited.**
- Be on time.

Technical Support

UF Computing Help Desk & Ticket Number: All technical issues require a UF Helpdesk Ticket Number.

The UF Helpdesk is available 24 hours a day, 7 days a week. <https://helpdesk.ufl.edu/> | 352-392-4357

Weekly Course Schedule

Note: Refer to Canvas modules for the due dates.

Date	Lab Activity
Jan 21	Online lab safety training
Jan 26	Introduction – basic lab safety practices
Jan 28	1) Basic microbiology techniques - 1
Feb 2	1) Basic microbiology techniques - 2
Feb 4	2) Bacterial enumeration, identification, and data interpretation
Feb 9	Career advancement
Feb 11	3) Bacterial staining and microscopy use
Feb 16	4) Plate count – Liquid food (milk)
Feb 18	5) Plate count – Solid food (seafood)
Feb 23	Presentation techniques
Feb 25	TBD
Mar 2	6) Antimicrobial Resistance - 1
Mar 4	6) Antimicrobial Resistance - 2
Mar 9	Mid-term review
Mar 11	Mid-term Exam (all lectures)
	<i>Spring break - No Class (Mar 14-21)</i>
Mar 23	7) Fermentation - 1 (prep and day 0 sampling)
Mar 25	Finalizing presentation topics
Mar 30	7) Fermentation – 2 (day 7 sampling)
Apr 01	7) Fermentation – 3 (data interpretation)

Apr 06	8) Detection and mitigation of viruses - 1
Apr 08	8) Detection and mitigation of viruses - 2
Apr 13	Students' presentation - 1
Apr 15	Students' presentation - 2
Apr 20	Review for final exam
Apr 30	Final exam (2, 5-8) 10-11:30 am

Exam and Grading Policies

There will be two exams. The materials provided by guest lecturers are included in the exams. Calculators may be allowed on exams (please follow the instruction). No scratch paper is allowed.

Course Grading Structure

Final grade for FOS5225C is based on combined grades from the FOS4222 lecture (70%) and FOS4222L lab (30%). You cannot drop a test.

	Midterm	Final	Reports	Attendance	Presentation
FOS 4222L	20%	20%	30%	10%	20% (oral)
FOS 5225C	20%	20%	30%	10%	10% (oral) + 10% (written)

Grading Scale

Course grading is consistent with [UF grading policies](#). There will be no curving or readjustment based on class performance.

Grade	Points
A	94 to 100
A-	90 to <94
B+	87 to <90
B	84 to <87
B-	80 to <84
C+	77 to <80
C	74 to <77
C-	70 to <74
D+	67 to <70
D	64 to <67
D-	61 to <64

Grade	Points
F	0 to <61

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/>

Campus Health and Wellness Resources

Visit <https://one.ufl.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.

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.

Privacy and Accessibility Policies

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

COURSE EVALUATIONS

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.