

**FOS4202 FOOD SAFETY & SANITATION
FOS5205 CURRENT ISSUES IN FOOD SAFETY
SYLLABUS**

Fall 2023

SCHEDULE AND CLASS LOCATION/FORMAT

Lectures

Tuesday	Period 5	11:45 AM - 12:35 PM	AFPL 101 (4202 and 5202 combined)
	Period 6	12:50 PM - 1:40 PM	AFPL 101 (5202 only)
Thursday	Period 5	11:45 AM - 12:35 PM	AFPL 101 (4202 and 5202 combined)

INSTRUCTOR

Dr. Boce Zhang

Office: AFPL 216

Email: boce.zhang@ufl.edu

Office Hours: Tuesday 8:30-10:30 am, or by appointment

TEACHING ASSISTANT

TBD

Email: TBD

Office Hours: TBD

Post-Doctoral ASSISTANT

Dr. Zhen Jia, Post-doctoral research associate

Lab: AFPL 208

Email: jia.zhen@ufl.edu

Office Hours: TBD

CREDITS & COURSE DESCRIPTION

2 Credits (FOS4202) & 3 Credits (FOS5205)

Lectures, discussions, and demonstrations concerning microbial, chemical and biological safety of food, principles of sanitation for the food processing and retail foods industries.

COURSE OBJECTIVES

Upon completion of this course, students should:

1. Be familiar with food safety hazards, assessment of risk, and evaluation.
2. Understand the principles, actions, and limitations of food sanitation procedures.
3. Be familiar with current and future implications concerning food safety hazards and risks.

COURSE PREREQUISITES

MCB 2000, MCB 2000L, or the equivalent.

TEXTBOOK AND COURSE MATERIALS (REQUIRED)

1) Textbook

Principles of Food Sanitation, 6th Ed., Marriott, Schilling and Gravani, Springer, New York, NY.
Found at: <http://www.amazon.com> or the UF Campus Bookstore

This text will be on reserve at the Marston Science Library under FOS 4202 / FOS 5205 and be available for purchase from the UF bookstores and from several online sources.

2) Other materials

Additional References will be provided for week's topic as needed. For example:

Scallan E, Hoekstra RM, Angulo FJ, Tauxe RV, Widdowson M-A, Roy SL, et al. 2011. Foodborne illness acquired in the United States—Major pathogens. *Emerg Infect Dis.* 17(1):7-15.

COURSE FORMAT

Students will acquire knowledge of the pertinent issues in food safety and sanitation through the use of lectures, class discussions, outside reading and assignments.

COURSE ANNOUNCEMENTS

All lecture slides will be posted on Canvas prior to the class. All announcements will be made through email. It is the student's responsibility to check the announcement. Students can reach out to the instructor and TAs via email.

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/>.

ASSESSMENTS

- **Class Assignments:** The 4 class assignments represent a significant part of the course grade, and their successful completion is critical. For FOS4202, an **optional** term paper for **extra credit** must be in the form of a scientific review paper on a particular topic relevant to food safety and sanitation. All topics must be cleared through the instructor(s). To be clear, this extra credit will not impact your grade if you decide not to attempt. This extra credit is worth approx. 1% of your final grade if you get a perfect score.

Please adhere to stated deadlines for maximum credit.

Assignments	Due Dates
Assignment 1	09/19
Assignment 2	10/24
Assignment 3	11/21
Assignment 4	12/05
Optional Extra Credit (FOS4202 ONLY)	12/12
Term Paper (FOS5205 ONLY)	12/12

- **Midterms:** There will be 3 midterms and 1 final. Midterms 1,2, & 3 (50 minutes each) will each cover approximately 1/3 of the course material and be equally weighted.

However, later course material will draw on foundation material presented in the first section of the course; students should therefore be prepared to apply principles from the entire course as they develop their answers to assignments and exams.

NOTE: Only 2 midterms will be counted in your Semester Total. The midterm with the lowest grade will be excluded, unless elected differently.

- **Final:** There final exam will be a comprehensive, closed book exam that will allow the student to demonstrate an understanding and synthesis of the concepts of food safety and sanitation from the entire course.

Exams	Date	Lectures
Midterm 1	09/21	1-4
Midterm 2	10/26	5-8
Midterm 3	11/23	9-12
Final	TBD	1-12

- **Presentation:** Students will work in pairs (Undergrads in FOS4202) or individually (Grads in FOS5205) to present a hot topic in food safety. At the beginning of the semester, a list of food commodities will be posted. Each student/pair will be required to **select one food/commodity** as the presentation topic, and the **topic is due to the faculty on the same day as midterm 1**. The presentation should include **at least one** of the following aspects of the selected food/commodity:

- Potential food safety hazards and latest FSMA regulation on the commodity
- Normal flora characterization of the commodity
- Food safety mitigation and validation for microbial quality & safety of the commodity

Only use peer reviewed journal articles that were published within the **past 5 years**. Presentation will be assessed by the instructor, TA(s), and peer students. Check **“Grading Rubrics for Presentation”** on how presentations are assessed.

- **Journal Club (FOS5205 ONLY):**

Each graduate student (FOS5205) will be required to select **ONE high-quality & high-impact publication** to give a brief 15-minute overview, followed by critiques, questions, or discussions. This is a practice for **critical thinking and scientific philosophy & methodology**.

- The paper should be **relevant to food safety** (in general). **Double check with instructor(s) for paper selection, due in 3 weeks**. Suggested topics include: Validation of FSMA regulations/rules; Pathogenesis; Outbreak Investigation, etc.
- The publication must be **peer-reviewed article** within the **past 5 years**. It is highly recommended to select from **top-tier journals** that are of high-quality and high-impact.
- The article **MUST be an original research article**. Review articles are NOT allowed.
- The selected article must be shared with the whole class **at least ONE week** before the discussion date.
- The lead will give a **15-minute overview** of the paper, include:
 - High-level overview of the research question that this paper is trying to address

- ii. Background, Introduction, Rationale/Objectives, Methods, Results, Conclusions. (Tips are available on Canvas)
- f. **All graduate students are required to read** the selected article before the discussion. **Be prepared with questions.**

- **Extra Credit (FOS4202 ONLY):**

Check ‘Important Dates and Dues’ to turn in this extra credit on time. To be clear, this is extra credit only and will not impact your grade if you decide not to attempt. This assignment is worth 10 points (or approx. 1% of your final grade if you get a perfect score). Please email your answers in Word format. Don’t forget to include your name as part of the file name (so I can search and organize exams and assignments, i.e., ‘Zhang_exam1.doc’). While I want you to think deeply about the question, I’d like concise answers. Limit your answers to approximately one page (single or double spaced). This is an open book project, but you must work on this independently. Please cite all references you use.

Here is the question: everyone knows (or at least they do now) that the proper way (and what is required under the FDA’s Food Code) is 20 seconds with soaps and preferably warm water. Your assignment is to tell me where the 20 seconds comes from. Don’t write “because its written in the regulation”, no, I’m looking for the scientific basis for 20 seconds. Why not 10 or 15 second, or 30 seconds. What was the science behind the number?

- **Term Paper (FOS5205 ONLY):**

- a. Check ‘Important Dates and Dues’ to turn in this paper on time.
- b. **Topics should be identical to your presentation topics.**
- c. Refer to graduate slides ‘G1 Term Paper & Presentation’ for more instructions. **Note: failing to follow the instructions will result in penalties.**

GRADINGS

NOTE: The 2 courses use different rubrics for ‘Semester Total’.

Semester Total for FOS4202

Assessments	Grade percentage
Class Assignments	20%
Mid-term exams (top 2 out of 3)	40% (20% each)
Final Exam (cumulative)	25%
Presentations	15%
Optional Extra Credit	1%

Semester Total for FOS5205

Assessments	Grade percentage
Class Assignments	20%
Mid-term exams (top 2 out of 3)	30% (15% each)
Final Exam (cumulative)	20%

Presentations	10%
Journal Club	10%
Term Paper	10%

Grading Scale: A (93 to 100), A- (90 to <93), B+ (87 to <90), B (83 to <87), B- (80 to <83), C+ (77 to <80), C (73 to <77), C- (70 to <73), D+ (67 to <70), D (63 to <67), D- (60 to <63), E (0 to <60).

COURSE POLICIES

- Attendance is required. Please refrain from checking or sending e-mails, texts, etc during class or lab sessions. Students are expected to participate in class discussions. Makeup exams will only be given with the permission of the instructor if adequate notice and documentation is provided in advance. A 10% pt penalty per day will be assigned for late assignments, reports, or extra credits, turned in within two days after the due date. No submission will be accepted after two days past the original due date.
- Requirements for make-up exams, assignments, and other work in this course are consistent with university policies that can be found at <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

MINIMUM TECHNICAL SKILLS/REQUIREMENTS

To complete your tasks in this course, you will need a basic understanding of how to operate a computer, how to use Zoom, how to use iClicker, and how to use word processing 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).
- 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.

ACADEMIC HONESTY

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following 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.*" You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: "*On my honor, I have neither given nor received unauthorized aid in doing this assignment.*"

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should

report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code>.

NETIQUETTE AND COMMUNICATION COURTESY

All members of the class are expected to follow rules of common courtesy during, before, and after class, in all email messages, threaded discussions, and chats.

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.

SERVICES FOR 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. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation

0001 Reid Hall, 352-392-8565, <https://disability.ufl.edu/>

GETTING HELP

Technical Difficulties:

For issues with technical difficulties for Canvas, please contact the UF Help Desk at:

- <http://helpdesk.ufl.edu>
- (352) 392-HELP (4357)
- Walk-in: HUB 132

Any requests for make-ups due to technical issues should be accompanied by the ticket number received from the Help Desk when the problem was reported to them. The ticket number will document the time and date of the problem. You should e-mail your instructor within 24 hours of the technical difficulty if you wish to request a make-up.

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. The Counseling & Wellness Center provides 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.

- University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu/cwc/

- Student Mental Health. Student Health Care Center, 392-1171, personal counseling;
- Counseling Services, Groups and Workshops, Outreach and Consultation, Self-Help Library, Wellness Coaching
- U Matter We Care, www.umatter.ufl.edu/
- Career Resource Center, First Floor JWRU, 352-392-1601, <https://career.ufl.edu/>
- Student Success Initiative, <http://studentsuccess.ufl.edu>
- Complaints: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf & <https://sccr.dso.ufl.edu/policies/student-honor-code-studentconduct-code/>
- Online Course: <http://www.distance.ufl.edu/student-complaint-process>
- Library Support: Various ways to receive assistance with respect to using the libraries or finding resources. cms.uflib.ufl.edu/ask
- Teaching Center: 352-392-2010 General study skills and tutoring: teachingcenter.ufl.edu/
- Writing Studio: 352-846-1138. Help brainstorming, formatting, and writing papers: writing.ufl.edu/writing-studio/

GRADING RUBRICS FOR PRESENTATIONS

Presenter(s) Name: _____

Topic: _____

Categories	3 pts. (A level)	2 pts. (B level)	1-0 pt. (C-D level)
Identifies and summarizes problem at issue	Identifies not only the basics of the issue, but recognizes nuances of the issue	Identifies the main problem and subsidiary, embedded, or implicit aspect of the problem	Does not identify and summarize the problem, is confused or identifies a different or in appropriate problem
Personal perspective and position	Draws support from experience and information not available from assigned sources	Identifies, appropriately, one's own position on the issue	Addresses a signal source or view of the argument and fails to clarify presented position relative to the one's own
Quality of evidence	Observes cause and effect and addresses existing or potential consequences. Clearly distinguishes between fact, opinion, and acknowledges value judgments	Examines the evidence and source of the evidence, questions its accuracy, precision, evidence, and completeness	Merely repeat information provided, taking it as truth or denies evidence without adequate justification
Completeness	A background of the topic and target audience is very clearly outlined and organized.	A background of the topic and target audience is somewhat outlined.	No, or minimal attempt made
Critical thinking & creativity	Identifies and questions the validity of the key assumptions and addresses the fundamental dimensions that underlie the issue	Identifies some of the key assumptions and issues	Does not surface the assumptions and fundamental questions that underlie the issue

Grade: ____ / 15

SEMESTER SCHEDULE FOR FOS4202 & FOS5205

Courses	FOS4202 & FOS5205 Undergrad & Grad	FOS5205 ONLY Grad ONLY	FOS4202 & FOS5205 Undergrad & Grad
Weeks of	Tuesday, <u>11:45 am (P5)</u> AFPL 101	Tuesday, <u>12:50 pm (P6)</u> AFPL 101	Thursday, <u>11:45 am (P5)</u> AFPL 101
W1, 08/20			1. Intro & Overview
W2, 08/27	2. Food Safety-1	G1. Term Paper & Presentation	2. Food Safety-2
W3, 09/03	3. Foodborne Pathogen-1	G2. Controversial Topics - Organic vs Conventional Farming	3. Foodborne Pathogen- 2
W4, 09/10	4. Food Allergens-1	G3. Recent Outbreaks-1	4. Food Allergens-2 <i>Journal club paper due (09/13)–FOS5205 ONLY</i>
W5, 09/17	5. Chemical & Physical Hazards <i>Assignment 1 Due (09/19)</i>	G3. Recent Outbreaks-2	EXAM 1 (Lectures 1-4) <i>Presentation topics due (09/21)</i>
W6, 09/24	6. Personal Hygiene	Journal Club Presentation-1	7. Regulations
W7, 10/01	8. Food Safety System-1	Journal Club Presentation-2	8. Food Safety System-2
W8, 10/08	9. Sanitizer & Sanitation-1	Journal Club Presentation-3	9. Sanitizer & Sanitation- 2
W9, 10/15	10. Pest Management	G4. Risk Assessment	EXAM 2 (Lectures 5-8)
W10, 10/22	11. Waste Management <i>Assignment 2 Due (10/24)</i>	G5. Implications of Outbreak & Regulation	<i>Reserve Seminar or Special Weather</i>
W11, 10/29	12. Facility & Sanitary Design-1	G6. Advanced Chlorine Chemistry	12. Facility & Sanitary Design-2
W12, 11/05	13. Case Study-Specific Plant-1	G7. Produce Safety Audits	13. Case Study-Specific Plant-2
W13, 11/12	Field Trip & Inspection	Field Trip & Inspection	EXAM 3 (Lectures 9-12)
W14, 11/19	14. Final Review <i>Assignment 3 Due (11/21)</i>	Graduate Student Seminar Presentation-1	
W15, 11/26	Undergrad Student Presentation-1	Graduate Student Seminar Presentation-2	Undergrad Student Presentation-2
W16, 12/03	Undergrad Student Presentation-3 <i>Assignment 4 Due (12/05)</i>	Graduate Student Seminar Presentation-3	
W17, 12/10	FINAL EXAM (Date TBD, Cumulative, Lectures 1-12) <i>Extra Credit Due (12/12, FOS4202 ONLY)</i> <i>Term Paper Due (12/12, FOS5205 ONLY)</i>		

Color Codes

Lectures	Field Trip	Presentations	Exams	<i>Due Dates</i>
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IMPORTANT DATES & DUES

Please adhere to stated deadlines for maximum credit. A 10% pt penalty per day will be assigned for late assignments, reports, or extra credits, turned in within two days after the due date. No submission will be accepted after two days past the original due date.

Assessments	Dates	Notes
Journal Club Paper Selection (FOS5205 ONLY) Due	09/13	
Assignment 1 (All)	09/19	
Midterm 1 (All)	09/21	Lectures 1-4
Presentation Topics (All)/Group Selection (FOS4204 ONLY) Due	09/21	
Assignment 2 (All)	10/24	
Midterm 2 (All)	10/26	Lectures 5-8
Assignment 3 (All)	11/21	
Midterm 3 (All)	11/23	Lectures 9-12
Assignment 4 (All)	12/05	
Optional Extra Credit (FOS4202 ONLY)	12/12	
Term Paper (FOS5205 ONLY)	12/12	
Final	TBD	Lectures 1-12

UF CLASS MEET TIMES SCHEDULE

<https://registrar.ufl.edu/courses/class-times>

Period	Time
1	7:25 - 8:15am
2	8:30 - 9:20am
3	9:35 - 10:25am
4	10:40 - 11:30am
5	11:45 - 12:35pm
6	12:50 - 1:40pm
7	1:55 - 2:45pm
8	3:00 - 3:50pm
9	4:05 - 4:55pm
10	5:10 - 6:00pm
11	6:15 - 7:05pm