

FOS 4222/5225C FOOD MICROBIOLOGY SYLLABUS
Spring Semester, 2017
5th Period 11:45-12:35, Room: FAB103

INSTRUCTOR: Dr. Anita C. Wright

Room 214 Aquatic Food Products Building

Phone: 392-294-3908

Email: acw@ufl.edu

Website: <http://fshn.ifas.ufl.edu/faculty/ACWright/FOS4222.html>

OFFICE HOURS: Monday/Wednesday 9:00-11:00

TEACHING ASSISTANT: Alan Gutierrez alan.gutierrez@ufl.edu; Ying Fan yingfan@ufl.edu; Li,Ruiqi richie2048@ufl.edu; Adam Baker bakercb@ufl.edu

COURSE DESCRIPTION: The content of this course includes the fundamental aspects of microbiological contamination and control during harvesting, processing and storage of food; microbial food fermentation; ecology of food spoilage; pathogenesis and detection of foodborne pathogens. A separate lab (FOS4222L) is also taught concurrently with this course, but is generally only open to Food Science majors.

COURSE LEARNING OBJECTIVES: Completion of this course will develop the following skills:

1. The ability to accurately measure growth, survival, and death of microbes in food and water.
2. Understanding of the metabolic basis for food preservation and fermentation.
3. Recognizing the symptoms, epidemiology, and pathogenesis of foodborne infections.
4. Critical evaluation of methods for detection, enumeration, and control of foodborne pathogens.
5. Understanding the basic tenets behind Food Safety policy and applications to the food industry.

REQUIRED PREREQUISITES: MCB3020 AND MCB3020 Lab or permission of instructor.

RELATED COURSES: Microbiology, Biochemistry, Bacterial Genetics, Immunology, Food Fermentations, Microbial Ecology, Epidemiology, Parasitology, Virology

RECOMMENDED TEXT: Food Microbiology: Fundamentals and Frontiers. 4th edition. ASM Press 2013 Washington D.C

ATTENDANCE: REQUIRED

COURSE INFO: All class notes and information will be posted on Canvas at least 24h before class. Please use this resource as your primary mode of communication for this course.

FOS4222 GRADING: Final Grade (A=90-100, B+=87-89, B=80-86, C+=77-79, C=70-76, D+=67-69, D=60-66) is based either on the average % of four tests or on the average of four test and the optional final. Unannounced quizzes will be used to gauge attendance and enhance exam grades. You cannot drop a test.

FOS5225C Grading: Course material includes both FOS4222 and 4222L. Lecture grade is based on the same scale and criteria for FOS4222. Lab grade is determined by Quizzes (10%), Two exams (50%), notebook (20%), and a Presentation (20%). In addition to this material, graduate students provide mentoring for undergraduates in the lab and will also develop an individual project with the instructor for a written presentation. Final grades for the graduate course will be distributed as follows: Lecture grade (50%), Class participation (10%), Lab grade (40%)

MAKE UP TESTS: A doctor's note or pre-approval by instructor is required.

FOS 4222/5225 FOOD MICROBIOLOGY SCHEDULE, SPRING SEMESTER, 2016

Date	TOPIC	Chapter
Jan 4	Introduction	
6	Physiology, Growth	1
9	Indicator Organisms/HACCP	4, 42
11	Spores	3
13	Meat, Poultry, Seafood	6
16	MLK Holiday	
18	Milk /Dairy Products	7
20	Produce	8-9
23	Preservation: Physical	29
25	Preservation: Chemical/Biological	30-31
27	REVIEW	
30	EXAM I	
FEB 1	Fermented Foods	33-35
3	Beer/Wine	36-37
6	Pathogenesis	Review Paper
8	Fungi, Algae, and Helminths	23; 26-27
10	Protozoa	28
13	<i>Staphylococcus aureus</i>	21
15	<i>Listeria monocytogenes</i>	20
17	<i>Bacillus</i> spp.	19
20	<i>Clostridia</i> spp.	17-18
22	REVIEW	
24	EXAM II	
27	<i>Salmonella enterica</i>	10
MAR 1	<i>Escherichia coli</i>	12
3	<i>Campylobacter</i> spp	11
6-10	SPRING BREAK	
13	<i>Cronobacter /Yersinia enterocolytica</i>	13-14
15	<i>Shigella</i> spp.	15
17	<i>Vibrios</i> spp.	16
20	Viruses (Dr. Melissa Jones)	24-25
22	REVIEW	
24	EXAM III	
27	Detection methods	39
29	Molecular Typing	43
31	Genomics	39
APR 3	Risk Assessment (Dr. Michelle Danyluk)	42
5	Antibiotic Resistance (Dr. K.C. Yeong)	2
7	Epidemiology	41
10	Emerging Interventions	
12	Emerging Pathogens	
14	REVIEW	
17	EXAM IV	
19	FINAL Review Session	
	FINAL (OPTIONAL) 7:30 AM	

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/scsr/process/student-conduct-honor-code>.

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.

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/*
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, 392-1601, www.crc.ufl.edu/*
- Complaints: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf
- Online Course: <http://www.distance.ufl.edu/student-complaint-process>

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, www.dso.ufl.edu/drc/