

**Spring 2024 BIOLOGY 351 (FOOD MICROBIOLOGY) COURSE OUTLINE – Version 7 (3/29/24)\***

		<b>Class Focus (Preclass Preparation is on BB)</b>	<b>Lab Topic and some due dates</b>
Week 1 (1/15)	W (1/17)	Introductions and course goals; Learning in real time; Framework for course; How do we know how many and which microbes are present in food?	W: Bootcamp (BC) Lab 1: How do we know HOW MANY microbes are in food (liquid)?  F: BC Lab 1 Solid foods
	F		BC Lab 2: How do we know WHAT SPECIES are present in food: 16s amplicon sequencing of pure cultures from JH milk (PCR)
Week 2 (1/22)	W (1/24)	Food production (FP): Preview - How are microbes used in food production? Microbial metabolic products alter substrates	W: BC Lab 1 continued- colony counts and data analysis
	F	FP - continued	W: BC Lab 2 continued: Gel. Purify. [16s] F: BC Lab 2 cont: 16s sequencing (Bioinfo) F: BC Lab 3: Fermentation in food production (Fruit or veg fermentation, pH and CFU)
Week 3 (1/29)	W (1/31)	FP - continued	W: BC Lab 3 continue: pH and plate counts of samples t= 5d; Data collection t = 0, 3d
	F	FP – finish Is it spoiled tasting	F Lab 4: Measuring acidification, protease and lipase and EPS in JH isolates F: Lab 3 Data collection
Week 4 (2/5)	W	Food spoilage (FS): How do we decide whether a food should be eaten? Food spoilage and preservation	W: Lab 4 Data collection and discussion
	F	FS	W and F : Lab 5: Spoilage lab Food in the framework (FIF) ideas due 2/9 ( <a href="#">LINK</a> )
Week 5 (2/12)	W	Assessment 1 (Weeks 1-4)	Student Choice Plan Due 2/16 or before ( <a href="#">LINK</a> )
	F	FS	
Week 6 (2/19)	W	Finish FS; Start food safety/pathogens (FP): What are some of the major pathogens and how do we keep food safe?	Lab 6: Detection pathogens or allergens (TBA) in food
	F	FP	
Week 7 (2/26)	W	FP	Lab 7: Detection of indicator organisms and pathogens in food via Petrifilm 2/26 Group Project ( <a href="#">LINK</a> ) ideas and group work survey due <a href="#">Survey LINK</a> W and F: Group project proposal work
	F	FP	
Week 8 (3/4)	W	FP	3/4 Group Proposal Due ( <a href="#">LINK</a> ) W: Group project proposal discussion with RJ ( <a href="#">LINK</a> )
	F	Assessment 2 (Weeks 5-8)	
Week 9 (3/11)		SRRING BREAK	
Week 10 (3/18)	W	Lab work all class session	FIF writing center submission ( <a href="#">LINK</a> )
	F	Future foods (FF): Functional foods	
Week 11 (3/25)	W	Paper 1	FIF Speech center appts ( <a href="#">LINK</a> )
	F	Paper 2	
Week 12 (4/1)	W	Paper 3	
	F	Paper 4	
Week 13 (4/8)	W	Visit with Maggie Bradshaw from Truckle Cheesemongers	4/8 FIF Written paper due ( <a href="#">LINK</a> )
	F		
Week 14 (4/15)	W		
	F		
Week 15 (4/22)	W	FIF Presentations ( <a href="#">LINK</a> )	
	F	FIF Presentations ( <a href="#">LINK</a> )	
	4/29 9-12	Final Lab Group Project Due – Presentations during final exam slot ( <a href="#">LINK</a> )	FIF Reflection Due April 30 ( <a href="#">LINK</a> ) Mapping Learning Outcomes Reflection Due May 1 at noon ( <a href="#">LINK</a> )

\* This is the first offering of this course. Subject material and pace of material may change.

