

# Food Microbiology (NFS 3203)

Fall 2023

T/R 11:40am-12:55pm; ROWELL/HEALTH 110

**INSTRUCTOR:** Andrea Etter; [andrea.etter@uvm.edu](mailto:andrea.etter@uvm.edu) ; MLS 353;

**OFFICE HRS:** MLS 353, by appointment

**PRE-REQUISITES:** NFS 053 or NFS 072 PLUS one of the following: NFS 114, NFS 153, NFS 156, or MMG 101; or Instructor permission

**COURSE DESCRIPTION:** Foodborne pathogens and spoilage microorganisms of commercial and epidemiological relevance. Conditions favorable to microbial growth, evaluation of foods for microbial content, and measures to prevent/reduce/eliminate potential microbe related food borne illness. Positive uses of microbes in the production of foods are also discussed (i.e. fermentation).

## COURSE LEARNING OBJECTIVES:

Upon successful completion of this course, the student will be able to do the following:

- Identify characteristics of foods which are conducive to bacterial growth
- Understand the difference between spoilage microbes and pathogens
- Recognize the top 10 causes of foodborne illness in the U.S., and be able to explain their distinguishing characteristics
- Identify the key regulatory agencies responsible for investigating foodborne illness and regulating foods
- Understand how microbes are detected and controlled in foods and food processing environments
- 

**REQUIRED MATERIALS:** The FDA's Bad Bug Book (2<sup>nd</sup> edition), which you can download for free here: <https://www.fda.gov/files/food/published/Bad-Bug-Book-2nd-Edition-%28PDF%29.pdf> ; it will also be posted on Brightspace

## GENERAL INFORMATION:

Student Learning Accommodations:

In keeping with University policy, any student with a documented disability interested in utilizing accommodations should contact SAS, the office of Disability Services on campus. SAS works with students and faculty in an interactive process to explore reasonable and appropriate accommodations, which are communicated to faculty in an accommodation letter. All students are strongly encouraged to meet with their faculty to discuss the accommodations they plan to use in each course. A student's

accommodation letter lists those accommodations that will not be implemented until the student meets with their faculty to create a plan.

Contact SAS: A170 Living/Learning Center; (802) 656-7753; [access@uvm.edu](mailto:access@uvm.edu) [www.uvm.edu/access](http://www.uvm.edu/access)

*EXAMS:* Questions on the exams will be in the form of multiple choice and short answer/short essay. Each exam will cover material discussed since the previous exam. All exams will include **critical thinking** questions that will give you the opportunity to apply the material we learned in class to new situations.

*Make-up exams:* In case of hospitalization or family emergency only, one make-up exam may be taken without penalty **IF** (1) you notify the instructor no later than the time of the exam, and (2) the make-up exam is taken within two days of the regularly-scheduled exam. Ten points will be automatically deducted from the exam if these make-up criteria are not met. **If you know in advance that you will miss any of the exam(s) for other reasons, notify the instructor at least a week prior to the exam.**

*QUIZZES:* we will have quizzes weekly on Tuesdays. These will be roughly 10 points, will be conducted in person, and will cover the previous week's material. You will be able to drop one quiz grade.

*WRITTEN ASSIGNMENTS:* Approximately weekly you will be asked to find a news/research article on an aspect of food safety globally and submit a short write up to Brightspace. Instructions will be provided

*ICLICKERS:* will be used to poll and add interaction during the class period. You are required to participate with the iClicker student app on a smartphone, tablet or laptop if you wish to earn those points. I have set up an iClicker integration with Brightspace, which will pull your name directly into my iClicker roster. You can join the class with iclicker cloud or with your iClicker by going to <https://join.iclicker.com/AALO> .

Select "Let's Go!" and you'll be brought to our campus portal.

- From your campus portal, log in with your **UVM netID** and password. **IMPORTANT: If you already have an iClicker account, do not create a new account.**
  - **Option 1 - An account is found:** Enter your existing iClicker password. Select "Link Accounts" to complete setup.
  - **Option 2 - If you have an iClicker account under a different email:** Select "Yes" and enter your account information to update your account.
  - **Option 3 - If you do not have an iClicker account:** Select "No," then select "Create Account." An account will be set up for you.
- **You should be dropped directly into this course:**
  - If you don't see this course in your account, use the + sign to search for my course:
    - In the "Find Your Institution" field, enter **The University of Vermont**
    - In the "Find Your Course" field, enter **NFS 3203**
    - Select "Add This Course" and it will be added to the main Courses screen of your iClicker account.
- **Set up the device(s) you'll use to participate in our class sessions.**
  - You can download the iClicker student mobile app via the App Store or Google Play, or you can use the iClicker web app by signing in as a student at [iclicker.com](http://iclicker.com).
- **Now the fun part! Participate in iClicker class activities.**
  - Make sure you have selected NFS 3203 from the main screen of iClicker at start of class.
  - Select the **Join** button that appears on your screen, then answer each question
  - For short answer, numeric, and target questions, make sure you select **Send**.

**DISCUSSION:** As much as possible, this will be an interactive class. I encourage you to come with questions.

### GRADING:

#### 450 pts possible

3 exams, 75 pts each:	225 points
11 Quizzes: 10 points/quiz, with one drop	100 points
6 writing assignments, 15 points each (one drop):	75 points
Class engagement (iClicker):	50 points

**\*\* You are responsible for keeping track of your grades. Not all of your scores may be entered in the Brightspace gradebook; therefore, the "CURRENT GRADE" percentage reported in Brightspace is NOT accurate.**

Final grades will be calculated as earned percentages of the total points possible:

<b>97-100: A+</b>	<b>93-96: A</b>	<b>90-92: A-</b>
<b>87-89: B+</b>	<b>83-86: B</b>	<b>80-82: B-</b>
<b>77-79: C+</b>	<b>73-76: C</b>	<b>70-72: C-</b>
<b>67-69: D+</b>	<b>63-66: D</b>	<b>60-62: D-</b>
<b>≤59: F</b>		

GPA will be assigned as per the registrars guidelines: <https://www.uvm.edu/registrar/grades>

### POLICIES AND PROCEDURES

**ATTENDANCE:** While Powerpoints will be available on Brightspace, my slides are sparse and details will be missing, so I would *strongly* encourage class attendance (also to earn iClicker points). You should attempt to obtain notes from classmates if you must miss class.

**HEALTH:** Please do not attend class in-person if you are unwell. I will be happy to Teams you in if you contact me an hour before class. If you have respiratory symptoms and are Covid-negative, and wish to attend class in person, please wear a mask to class.

**CLASSROOM BEHAVIOR POLICY:** All participants in this course shall be treated with dignity and respect. Anyone who consistently fails to demonstrate respect for others will be asked to withdraw from the course. To ensure that the classroom is an optimal environment for learning, the following rules will be observed:

- **Cellular phones, wireless internet devices, and audio devices of any type must be turned to silent while in the classroom**
- **No electronic devices will be allowed to be in use during an exam.** If you have special circumstances, please consult your professor IN ADVANCE.

- **Cheating Policy:** Students caught cheating on exams will receive no credit for that exam. Homework assignments that show strong evidence of copying (*e.g.*, responses that are word-for-word identical to another student's response) will likewise receive no credit. **Photography of keys and exams is strictly prohibited and considered cheating.**
- **Plagiarism:** Students are expected to cite sources at the end of each sentence discussing non-common-knowledge information. Failure to adequately cite sources will result in a lower grade. Direct quotations without citation and parentheses will be considered plagiarism and may result in a zero on the assignment.

**COURSE WITHDRAWAL:** If you decide to drop this course for any reason, then it is your responsibility to officially withdraw. However, **please come talk to me first.**

**COURSE EVALUATIONS:** All students should complete an evaluation of the course/instructor at the end of the course. This will be anonymous and confidential and will be used to improve the course in the future. Additionally, the instructor may request a mid-course evaluation; this will be optional, but will also be confidential and anonymous.

**EXTRA CREDIT:** At her discretion, Dr. Etter may offer extra credit assignments from time to time. **No extra credit assignments will be offered after the semester ends (12/09).**

**LETTERS OF RECOMMENDATION:** I am delighted to write letters of recommendation for good students. If you anticipate wanting a letter of recommendation from me, please let me know **as early as possible** and make an appointment to talk to me about your career plans (*i.e.*, what you need the letter for). This will allow me to write a much more informed letter for you. I will not write you a mediocre or negative letter; **if I feel I cannot provide a strong letter, I will turn down your request or ask for more information.**