Fall 2023 Basic Concepts of Foods (3 credits)

Tuesday, 10:05 to 1:05

231 Marsh Life Sciences

Instructor: Emily Barbour, ebarbour@uvm.edu

Office hours: Tuesday 1:30-3:30, or by appointment

Course Description: This course introduces students to the basic concepts of food central to the disciplines of nutrition, food science and food systems. Students are introduced to these basic concepts through the process of meal preparation. Thus, concepts and practices are always considered as interconnected. Students will also be introduced to the practice of sensory analysis and will learn to pay closer attention to the fine sensory details of a meal. Finally, a major goal of this course is to have the student be able to understand and use these concepts not just in the classroom but in their home and work settings.

Dietetics Program Standards met in Basic Concepts of Foods:

KRDN 2.1 Demonstrate effective and professional oral and written communication and documentation.

KRDN 2.6 Demonstrate an understanding of cultural competence.

KRDN 3.6 Explain the processes involved in delivering quality food and nutrition services.

Course Objectives:

The students will be able do the following**:**

- Identify the names and principle characteristics of the major classes of foods (carbohydrates, proteins, fats).
- Identify the following basic concepts of foods: food safety (time and temperature); heat and heat transfer; gelatinization of starch; gluten formation; fats and smokepoints; maillard reaction; caramelization; coagulation of protein; denaturation of protein.
- Demonstrate the applications of the above basic concepts of foods while making a dish and preparing an entire meal.
- Describe the effects that techniques and styles of food preparation have on the nutritional content of food.
- Demonstrate a working knowledge of how to read, analyze, and adapt recipes. Develop a skillful cooking practice.
- Identify and navigate the full cycle of actions necessary in making a meal and while preparing several recipes at once.

- Identify and analyze sensory components of food.
- Practice proper and safe food handling in a kitchen laboratory and home kitchen.

Basic Concepts of Food: Hybrid Strategies and Expectations

- You are expected to complete all online elements of this course. Failure to do so will result in a lower grade. Note that Brightspace has tracking features that allow me to know whether or not you have accessed content.
- All the online elements of the course need to be completed before the weekly experiential learning class in the foods lab. All readings and videos must be read or watched completely before class. If you don't understand a reading or video, bring in a question or list of questions. We will have a review at the beginning of each in person session.
- You are expected to commit to both the in-person labs and online materials and activities.
- **You cannot miss more than two active in-person lab sessions**. If for any reason you do need to miss more than two, you should contact your instructor to make-up discuss options. All missed in-person lab sessions must be made up.

Class Conduct:
Course Evaluation and Expectations:
I expect professional standards of behavior in the classroom.

- Cell phones will not be allowed in the lab for reasons of sanitation.
- Chronic tardiness is not acceptable.
- In case of a campus emergency, the instructor will be notified via the classroom computer, and the instructor will notify students of the emergency.
- Late work: I will accept late work and will not take off points for assignments turned in within a few hours of the deadline OR if you've contacted me to discuss an extension. Any late work that I receive without being contacted ahead of the deadline—or within 24 hours of the deadline if there are extenuating circumstances—will still be graded, but will earn a maximum of an 89%. All late work must be turned in by a week before the last class meeting at the latest. One exception is that **post-lab work must be turned in within a week of the completion of the lab**.

Class Code: ***All class participants are expected to adhere to the academic honesty policies of the University of Vermont. Additionally, the University prohibits discrimination and unlawful harassment. Please see the University of Vermont Code and Student Handbook available on the UVM website.***
All assignments need to satisfy the standards of academic integrity**.** *Plagiarism* (not attributing other people's ideas, arguments or phrases properly) and *cheating* will result in a failing grade. ***Offences against the Code of Academic Integrity are deemed serious and insult the integrity of the entire academic community. Any suspected deliberate violations of this code are taken very seriously and will be forwarded to the Center for Student Ethics & Standards for further investigation****.*

Religious Holidays: The official policy for excused absences is due to a religious holiday is as follows: Students have the right to practice the religion of their choice. Each semester students should **submit**

in writing to their instructors by the end of the second full week of classes their documented religious holiday schedule for the semester. Faculty must permit students who miss work for the purpose of religious observance to make up this work.

Health and Safety Policies:

- Wash your hands thoroughly (20 seconds, warm water and soap) whenever you touch communal surfaces or tools, or your face. Do not bring your phone into the kitchen.
- Comply with UVM's current health and safety policies.
- If you are feeling sick, do not come into class. Contact your instructor at least 24 hours before a class you need to miss because of an illness when possible, or as soon as possible before or after class. Your instructor will offer you options to make-up the lab.
- You will have two weeks past the original due date of the post-lab work to make up missed labs. If you are unable to make up a lab within two weeks, make sure to speak to your instructor to arrange an extension or alternate assignment.

Student Learning Accommodations: In keeping with University policy, any student with a documented disability interested in utilizing accommodations should contact ACCESS, the office of Disability Services on campus. ACCESS works with students and faculty in an interactive process to explore reasonable and appropriate accommodations via an accommodation letter to faculty with approved accommodations as early as possible each semester. All students are strongly encouraged to meet with their faculty to discuss the accommodations they plan to use in each course. Contact ACCESS: A170 Living/Learning Center; 802-656-7753; access@uvm.edu; http://www.uvm.edu/access

UVM's policy on disability certification and student support:
http://www.uvm.edu/~uvmppg/ppg/student/disability.pdf

Academic Integrity: The policy addresses plagiarism, fabrication, collusion, and cheating.
http://www.uvm.edu/~uvmppg/ppg/student/acadintegrity.pdf

Grade Appeals: If you would like to contest a grade, please follow the procedures outlined in this policy: http://www.uvm.edu/~uvmppg/ppg/student/gradeappeals.pdf

Grading: For information on grading and GPA calculation, go to http://www.uvm.edu/academics/catalogue and click on Policies for an A-Z listing.

Code of Student Rights and Responsibilities:
http://www.uvm.edu/~uvmppg/ppg/student/studentcode.pdf

FERPA Rights Disclosure: The purpose of this policy is to communicate the rights of students regarding access to, and privacy of their student educational records as provided for in the Family Educational Rights and Privacy Act (FERPA) of 1974. http://www.uvm.edu/~uvmppg/ppg/student/ferpa.pdf

Promoting Health & Safety: The University of Vermont's number one priority is to support a healthy and safe community. Center for Health and Wellbeing http://www.uvm.edu/~chwb/ Counseling &

Psychiatry Services (CAPS) Phone: (802) 656-3340 C.A.R.E. If you are concerned about a UVM community member or are concerned about a specific event, we encourage you to contact the Dean of Students Office (802-656-3380). If you would like to remain anonymous, you can report your concerns online by visiting the Dean of Students website at http://www.uvm.edu/~saffairs/

Required Materials:

There are no required text books for this class.

Course Assessments:	
Discussion posts	10%
Assessment: Weekly Quizzes and Product ID	15%
Pre- and Post-lab work	25%
Engagement & application (lab/online participation)	10%
Midterm	15%
Meal Design Presentation	15%
Final Writing Assignment	10%

Class Schedule		**Assignments & Due Dates**
Part One: Food Agency		
Module 1: 8/29 **Online Only**	Module 1: A. Introductions B. Food Safety C. Food Agency D. Sensory Analysis	**Due by the end of the day Friday:** • Readings and videos on Brightspace • Fill out food agency scale • Introduction assignment • Sensory analysis home assignment
Module 2: 9/5 **Online learning materials, in-person lab**	Module 2: A. In-person Introductions B. Basic Food Safety in Lab C. Knife Skills D. Mise En Place *Vegetable Cuts/Chopped Salad*	**Before lab session:** • Readings and videos on Brightspace • Read the syllabus, lab protocols, and lab packet • Online quiz on food safety, knife skills, MEP • Discussion post and response **Lab session:** • Lab Demo: Instructions and product identification • Prepare the recipe • Sensory analysis **Two days after lab:** • Discussion post and response • Post-lab work

Module 3: 9/12 **Online learning materials, in-person lab**	Module 3: A. Food Safety B. Mise en Place C. Heat Transfer D. Gelatinization of Starch *Vegetable stock and Sesame miso vegetable soup*	**Before Class:** • Readings and videos on Brightspace • Online quiz on Heat and Heat Transfer • Read the Lab Packet and do your MEP drawing • Discussion post and response **Lab session:** • Lab Demo: Instructions and product identification • Prepare the recipe • Sensory analysis **Two days after lab:** • Post-lab work
Module 4: 9/19 **Online learning materials, in-person lab**	**Module** 4: A. Mise En Place B. Heat Transfer C. Gelatinization of Starch D. Multi-Step Utilization of Product *Butternut Squash Risotto/ Salad and Vinaigrette*	**Before Class:** • Readings and videos on Brightspace • Online quiz on Starch • Read the Lab Packet and do your MEP drawing • Discussion post and response **Lab session:** • Lab Demo: Instructions and product identification • Prepare the recipe • Sensory analysis **Two days after lab:** • Post-lab work
Module 5: 9/26 **Online learning materials, in-person lab**	Module 5: A. Mise en Place B. Heat Transfer C. Smokepoints D. Frozen vegetables *Thai-style Fried Rice / Korean Carrot Salad*	**Before Class:** • Readings and videos on Brightspace • Online quiz on Fats and Oils • Read the Lab Packet, do your forwards sequence • Discussion post and response **Lab session:** • Lab Demo: Instructions and product identification • Prepare the recipe • Sensory analysis **Two days after class:** • Post-lab work

Module 6: 10/3 **Online learning materials, in-person lab**	Module 6: A. Food Agency Review B. Dietary Guidelines C. Creating a menu D. Beans and Legumes E. Canned v. whole beans F. Spices G. Final Assignment Introduction *Chickpea sauté/ Dal/Rice*	**Before Class:** • Readings and videos on Brightspace • Read the Lab Packet, do your Forwards Sequence • Discussion post and response **Lab session:** • Lab Demo: Instructions and product identification • Prepare the recipe • Sensory analysis **Two days after lab:** • Post-lab work
Module 7: 10/10 **Online learning materials, in-person lab**	Module 7: A. Heat Transfer B. Coagulation C. Denaturation of Protein D. Thickened Sauces E. Emulsification *Frittata /Lemon curd/Scones*	**Before Class:** • Readings and videos on Brightspace • Online quiz on Proteins • Read the Lab Packet, do your Forwards Sequence • Discussion post and response **Lab session:** • Lab Demo: Instructions and product identification • Prepare the recipe • Sensory analysis **Two days after lab:** • Post-lab work
Module 8: 10/17 **Online Only**	Module 8: A. Food Agency Review B. Dietary Guidelines C. Creating a menu	**Before Class:** • Readings and videos on Brightspace • Discussion post and response **By the end of the lab session:** • Submit Meal Design Project recipe proposal **Two days after lab:** • Submit midterm
Module 9: 10/24	Module 8: A. Backwards Sequence B. Heat Transfer C. Gelatinization of Starch	**Before Class:** • Readings and videos on Brightspace • Online quiz on Browning • Read the Lab Packet, do your Backwards Sequence

Online learning materials, in-person lab	D. Caramelization/ Maillard Reaction E. Gluten Formation F. From scatch v. processed *Homemade Pasta with Tomato Sauce /Cacio e Pepe with Roasted Veggies*	• Discussion post and response **Lab session:** • Lab Demo: Instructions and product identification • Prepare the recipe • Sensory analysis **Two days after lab:** • Post-lab work
Module 10: 10/31 **Online learning materials, in-person lab**	Module 9: A. Backwards Sequence B. Smokepoints C. Heat Transfer D. Maillard Reaction E. Caramelization F. Gelatinization of Starch G. Emulsification H. Recipe Analysis overview *Sautéed Chicken Breast/Roast Potatoes/Salad with Vinaigrette*	**Before Class:** • Readings and videos on Brightspace • No quiz this week • Read the Lab Packet and do your Backwards Sequence **Lab session:** • Lab Demo: Instructions and product identification • Prepare the recipe • Sensory analysis **Two days after lab:** • Discussion post and response • Post-lab work
Week 11: 11/7 **Online learning materials, in-person lab**	Module 10: A. Backwards Sequence B. Heat Transfer C. Gluten Formation D. Gelatinization of Starch E. Tenderness in Baked Goods *Braised chicken thighs and potatoes / Apple galette*	**Before Class:** • Readings and videos on Brightspace • Online quiz on Gluten • Read the Lab Packet, do your Backwards Sequence **Lab session:** • Lab Demo: Instructions and product identification • Prepare the recipe • Sensory analysis **Two days after lab:** • Discussion post and response • No post-lab work • **Next week: Meal Design Presentations (in class)**

		Bring your Meal Design Project Recipe Analysis to class next week. The final draft will be due 2 days after the class session.
PART TWO: **Food Agency Applications**	**You have learned the basic concepts of foods. You have begun to develop your own food agency. Now, what does everyday cooking mean to Americans? How might that vary depending on ethnicity, race and socioeconomic status? And, what is the significance if you want to educate about healthy meals?**	
Week 12: 11/14 **In-person presentations**	Module 12: F. Backwards Sequence G. Mise en Place H. Dietary Guidelines I. Creating a menu	**Before Class:** • Prepare presentation and submit by 30 minutes before class **Lab Session:** • **Presentations** • Discussion and decision on final lab session • Final paper introduction
11/20-11/24	**Thanksgiving break**	
Week 13: 11/28 **Online learning materials, in-person lab**	Module 13: A. Backwards Sequence B. Mise en Place C. Creating a meal from pantry staples D. Sensory analysis	**Before Class:** • Readings on Brightspace • Read lab-packet and pre-lab work **Lab session:** • Make the mystery basket meal • Work on final paper worksheet **Two Days After Lab:** • Submit final paper worksheet
Week 14: 12/5 **Online learning materials, in-person lab**	Module 14: A. Backwards Sequence B. Mise en Place C. Product ID D. Food Agency Review	**Before Class:** • Read recipe and prepare backwards sequence **Lab session:** • **Graded Product ID** • Make the chosen Meal Design Project meal • Sensory analysis and discussion of flavor • Food Agency discussion **By 12/11: Writing Assignment Final Drafts Due**