

## Spring 2020 Basic Concepts of Foods

3 credits/ Wednesdays noon-3pm

231 Marsh Life Sciences

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Office hours: Thursdays from 1-2:30pm

TA: Tung Liu

**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 in the same way as everyday Americans – through the process of meal preparation. Thus, concepts and practices are always considered as interconnected. The complex variety of meal preparation practices among diverse populations in the United States is integrated throughout the course. 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.

- Explain the importance of cultural and social influences in sensory preference, food pairing and meal preparation.
- 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.
- Identify and analyze sensory components of food and the social benefits of shared meals.
- Increase self-efficacy in meal preparation.
- Develop the capacity to move from idea to action to result for multiple recipes.
- Practice proper and safe food handling in a kitchen laboratory.
- Develop cultural competency in various dishes and meal preparation for Americans from varying ethnic groups.
- Exhibit teamwork and mutuality in the laboratory.

### **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 Blackboard has tracking features that allow me to know whether or not you have accessed videos. We will use these features to periodically check on every student's participation.
- 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 on-line lectures. Attendance is mandatory for all weekly in-person labs. You will only be able to make up 1 lab/class session per semester without risking reduced points for engagement and application.
- I do not accept late assignments.

Class Conduct:

#### **Course Evaluation and Expectations:**

##### **I expect professional standards of behavior in the classroom.**

- Cell phones should be turned off for the entire class period except when related to class activities (e.g. photos of dishes, checking recipe, etc.).
- 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.
- Do not disrupt other students and the class flow by getting up and leaving unless absolutely necessary.

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.

**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](mailto: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/>

**Textbook [Required]:**

- Waters, Alice **Art of Simple Food**
- Trubek, Amy **Making Modern Meals: How Americans Cook Today**

**[Both books are on reserve at the library]**

- Other required and suggested readings will be found on Blackboard

**Course Assessments:**

5 on-line discussion posts = 5%

7 weekly quizzes = 15%

Pre and Post Lab Work = 20%

Engagement and application (lab and discussion)= 10%

Midterm (Vocabulary and Concepts) (in class) = 10%

1 essay on dietary guidelines and meal prep = 15%

1 presentation = 10%

Final (Product ID, Vocabulary, Concepts, Application) (in class) = 15%

Class Schedule		Assignments & Due Dates
Part One: Food Agency		
<b>Week 1: 1/15</b> <b>On-Line Only</b>	Module 1: A. Introduction B. Food Agency C. Meal Preparation in Context	<b>Due 3 days after Class Session:</b> <ul style="list-style-type: none"><li>• Introduce yourself on our Class Discussion Board</li><li>• Review syllabus and answer questions</li><li>• Fill out food agency scale</li><li>• Read <i>Art of Simple Food Introduction</i> (3-30) and respond to first discussion post question</li><li>• Watch Food Agency videos and respond to second discussion post question</li><li>• Readings and videos on blackboard</li></ul>

<p><b>Week 2: 1/22</b></p> <p><b>On-Line Lab Prep</b></p> <p><b>In-Person Lab</b></p>	<p>Module 2:</p> <ul style="list-style-type: none"> <li>A. Basic Food Safety in Lab</li> <li>B. Knife Skills Assessment</li> <li>C. Emulsification</li> <li>D. Mise En Place</li> <li>E. Sensory Analysis</li> </ul> <p><i>Vegetable Cuts/Chopped Salad (pp 50-51/Vinaigrette p 44)</i></p>	<p><b>Before Class</b></p> <ul style="list-style-type: none"> <li>• On-line Quiz on Food Safety</li> <li>• Third post on Class Discussion Board about Cooking Around the World Respond to 2 Posts</li> </ul> <p><b>In Class</b></p> <ul style="list-style-type: none"> <li>• Post Lab Work: Sensory Reflection and Analysis (to be completed in class)</li> </ul>
<p><b>Week 3: 1/29</b></p> <p><b>On-Line Lab Prep</b></p> <p><b>In-Person Lab</b></p>	<p>Module 3:</p> <ul style="list-style-type: none"> <li>A. Food Safety</li> <li>B. Mise en Place</li> <li>C. Heat Transfer</li> <li>D. Gelatinization of Starch</li> </ul> <p><i>Vegetable Stock/Winter Vegetarian Minestrone (pp 65-73)</i></p>	<p><b>Before Class:</b></p> <ul style="list-style-type: none"> <li>• On-line quiz on Heat and Heat Transfer</li> <li>• Readings and videos on blackboard</li> <li>• Pre Lab Work: Mise en Place Drawing</li> </ul> <p><b>In Class:</b></p> <ul style="list-style-type: none"> <li>• Product Identification</li> <li>• Sensory reflection and analysis (to be completed in class)</li> </ul> <p><b>Due 3 Days After Class</b></p> <ul style="list-style-type: none"> <li>• Post Lab Work: Reflection on Practice</li> </ul>
<p><b>Week 4: 2/5</b></p> <p><b>On-Line Lab Prep</b></p> <p><b>In-Person Lab</b></p>	<p>Module 4:</p> <ul style="list-style-type: none"> <li>A. Mise En Place</li> <li>B. Heat Transfer</li> <li>C. Gelatinization of Starch</li> <li>D. Multi-Step Utilization of Product</li> </ul> <p><i>Butternut Squash Risotto/Bianco (pp 105-106)/Salad and Variations (pp 50-51)/Vinaigrette (p 44)</i></p>	<p><b>Before Class:</b></p> <ul style="list-style-type: none"> <li>• On-line quiz on Starch</li> <li>• Readings and videos on blackboard</li> <li>• Pre Lab Work: Mise en Place Drawing</li> </ul> <p><b>In Class:</b></p> <ul style="list-style-type: none"> <li>• Product ID of rice and analysis of rice varieties and best culinary practices (to be completed in class)</li> <li>• Sensory reflection and analysis (to be completed in class)</li> </ul> <p><b>Due 3 Days after Class</b></p> <ul style="list-style-type: none"> <li>• Post Lab Work: Reflection on Practice</li> </ul>

<p><b>Week 5: 2/12</b></p> <p><b>On-Line Lab Prep</b></p> <p><b>In Person Lab</b></p>	<p>Module 5:</p> <ul style="list-style-type: none"> <li>A. Mise en Place</li> <li>B. Heat Transfer</li> <li>C. Smokepoints</li> <li>D. Emulsifications of Fats and Oils</li> <li>E. Beans and Legumes</li> </ul> <p><i>Beans and Fats White Bean (pp 75-81)/Hummus (p 293) Pasta</i></p>	<p><b>Before Class:</b></p> <ul style="list-style-type: none"> <li>• On-line quiz on Fats, Oils and Smokepoints</li> <li>• Readings and videos on blackboard</li> <li>• Pre-Lab Work: Mise en Place</li> </ul> <p><b>In Class:</b></p> <ul style="list-style-type: none"> <li>• Product Identification</li> <li>• Sensory reflection and analysis (to be completed in class)</li> </ul> <p><b>3 Days after Lab:</b></p> <ul style="list-style-type: none"> <li>• Post Lab Work: Reflection on Practice</li> </ul>
<p><b>Week 6: 2/19</b></p> <p><b>On-Line Lab Prep</b></p> <p><b>In Person Lab</b></p>	<p>Module 6:</p> <ul style="list-style-type: none"> <li>A. Backwards Sequence</li> <li>B. Smokepoints</li> <li>C. Heat Transfer</li> <li>D. Gelatinization of Starch</li> <li>E. Caramelization/Maillard Reaction</li> <li>F. Gluten Formation</li> </ul> <p><i>Homemade Pasta (pp 86-89) with Roasted Veggies (pp 111-116) and Bechamel (p 225)</i></p>	<p><b>Before Class:</b></p> <ul style="list-style-type: none"> <li>• On-line quiz on Gluten</li> <li>• Readings and videos on blackboard</li> <li>• Pre-Lab Work: Mise en Place and Backwards Sequence</li> </ul> <p><b>Due in Class:</b></p> <ul style="list-style-type: none"> <li>• Product Identification</li> <li>• Sensory reflection and analysis (to be completed in class)</li> </ul> <p><b>3 Days after Lab:</b></p> <ul style="list-style-type: none"> <li>• Post Lab Work: Reflection on Practice</li> </ul>
<p><b>Week 7: 2/26</b></p> <p><b>On-Line Prep</b></p> <p><b>In Person Lab</b></p>	<p>Module 7:</p> <ul style="list-style-type: none"> <li>A. Backwards Sequence</li> <li>B. Smokepoints</li> <li>C. Heat Transfer</li> <li>D. Maillard Reaction</li> <li>E. Caramelization</li> <li>F. Gelatinization of Starch</li> <li>G. Emulsification</li> </ul> <p><i>Sautéed Chicken Breast/Roast Potatoes/Salad with Vinaigrette, Chicken Stock</i></p>	<p><b>Before Class:</b></p> <ul style="list-style-type: none"> <li>• On-line quiz on Maillard Reaction and Caramelization</li> <li>• Readings and videos on blackboard</li> <li>• Pre-Lab Work: Mise en Place and Backwards Sequence</li> </ul> <p><b>Due in Class:</b></p> <ul style="list-style-type: none"> <li>• Product Identification</li> <li>• Sensory reflection and analysis (to be completed in class)</li> </ul> <p><b>3 Days after Lab:</b></p> <ul style="list-style-type: none"> <li>• Post Lab Work: Reflection on Practice</li> </ul>

<p><b>Week 8: 3/4</b></p> <p><b>On-Line Prep</b></p> <p><b>In Person Lab</b></p>	<p>Module 8:</p> <ul style="list-style-type: none"> <li>A. Backwards Sequence</li> <li>B. Heat Transfer</li> <li>C. Gluten Formation</li> <li>D. Gelatinization of Starch</li> </ul> <p><i>Chicken and Biscuits (p 275)/Apple Tart (pp 174, 180)</i></p>	<p><b>Before Class:</b></p> <ul style="list-style-type: none"> <li>• Readings and videos on blackboard</li> <li>• Pre-Lab Work: Mise en Place and Backwards Sequence</li> </ul> <p><b>In Class:</b></p> <ul style="list-style-type: none"> <li>• Round Robin Sensory Analysis</li> <li>• Mid term review</li> </ul>
<p><b>Week 9: 3/18</b></p> <p><b>In Person Lab</b></p> <p><b>On Line Discussion</b></p>	<p>Module 9:</p> <ul style="list-style-type: none"> <li>A. Heat Transfer</li> <li>B. Coagulation</li> <li>C. Denaturation of Protein</li> <li>D. Thickened Sauces</li> <li>E. Gluten Formation</li> </ul> <p><i>Omelets (pp 164-165)/Lemon Tart (p 367) with Meringue</i></p>	<p><b>Before Class:</b></p> <ul style="list-style-type: none"> <li>• On-line quiz on Proteins</li> <li>• Readings and videos on blackboard</li> </ul> <p><b>In Class:</b></p> <ul style="list-style-type: none"> <li>• Mid-term</li> </ul>
<p><b>PART TWO:</b></p> <p><b>Food Agency Applications</b></p>		<p><b>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?</b></p>
<p><b>Week 10: 3/25</b></p> <p><b>On-Line Lab Prep</b></p> <p><b>In Person Lab</b></p>	<p>Module 10:</p> <ul style="list-style-type: none"> <li>A. Backwards Sequence</li> <li>B. Mise en Place</li> <li>C. Trends in Meal Preparation</li> <li>D. Mediterranean Cuisine</li> <li>E. Introduction to Dietary Guidelines</li> </ul> <p><i>1 dish from the book using pantry items, incorporating principles from Mediterranean Diet</i></p>	<p><b>Before Class:</b></p> <ul style="list-style-type: none"> <li>• Fourth Post in On-Line Discussion: Family Recipe and Reflection</li> <li>• Readings and videos on blackboard</li> <li>• Work with your partner to pick a dish using ingredients from the pantry list and incorporating at least 3 concepts of foods.</li> <li>• Pre-Lab Work: Mise en Place and Backwards Sequence</li> </ul> <p><b>In Class:</b></p> <ul style="list-style-type: none"> <li>• Student Led Sensory Analysis</li> </ul> <p><b>3 Days After Lab:</b></p>

<p><b>Week 11: 4/1</b></p> <p><b>On-Line Lab Prep</b> <b>In Person Lab</b></p>	<p>Module 11:</p> <ul style="list-style-type: none"> <li>A. Recipe Variations</li> <li>B. USDA Dietary Guidelines and Creating a Menu</li> <li>C. Trends in Meal Preparation</li> </ul> <p><i>3 dishes from the book using pantry items and at least 3 concepts</i></p>	<p><b>Before Class:</b></p> <ul style="list-style-type: none"> <li>• Work with partner to pick three dishes using ingredients from the pantry list and incorporating at least 3 concepts of foods.</li> <li>• Readings and videos on blackboard</li> <li>• Pre-Lab Work: Mise en Place and Backwards Sequence</li> </ul> <p><b>In Class:</b></p> <ul style="list-style-type: none"> <li>• Student Led Sensory Analysis</li> <li>• Student Led Question and Answer Session on Dietary Guidelines</li> <li>• Discussion/Presentation on Meal Trends</li> </ul>
<p><b>Week 12: 4/8</b></p> <p><b>No active cooking</b></p>	<p>Module 12:</p> <ul style="list-style-type: none"> <li>A. Demographics and Dietary Patterns</li> </ul> <p>USDA Meal Presentations</p>	<p><b>In Class:</b></p> <ul style="list-style-type: none"> <li>• Presentations of Final Meals (PPT loaded onto BB in advance)</li> <li>• Vote on Final Meal Preparation</li> </ul> <p><b>By Monday, April 12: Essay Draft Due</b></p>
<p><b>Week 13: 4/15</b></p> <p><b>Lab Only</b></p>	<p>Module 13:</p> <p>USDA Meal Preparation Lab</p>	<p><b>In Class:</b></p> <ul style="list-style-type: none"> <li>• USDA Lab Preparation and Meal</li> <li>• Concept Review</li> </ul>
<p><b>Week 14: 4/22</b></p> <p><b>Lab Only</b></p>	<p>Module 14:</p> <p>Processed, From Scratch, Recipe, No Recipe</p>	<p><b>In Class:</b></p> <ul style="list-style-type: none"> <li>• Final paper workshop: Revisions from feedback</li> <li>• Same Meal, Different Ways</li> </ul>
<p><b>Week 14: 4/29</b></p> <p><b>Lab Only</b></p>	<p>Module 15:</p> <p>Reflection, Test, and Clean Up</p>	<p><b>Before Class:</b></p> <ul style="list-style-type: none"> <li>• Reflection on Food Agency</li> </ul> <p><b>In Class</b></p> <ul style="list-style-type: none"> <li>• Final Test: Concepts, Product ID, Vocabulary Applications</li> <li>• Station Clean Up</li> </ul> <p><b>By Monday, May 4: Final Essay Due</b></p>