

Department of Nutrition  
University of North Carolina at Chapel Hill

**NUTRITION 650/650L**  
**Food Science and Culinary Arts**  
**Spring 2018**

- I Lecture/Lab:** Wednesdays, 8:00 AM-1:10 PM  
241 Rosenau Hall, Kitchen/Nutrition Conference Room  
Gillings School of Global Public Health
- II Professor:** Shaynee Roper, MEd., RD, LDN,  
Email: [nutrteach@sbcglobal.net](mailto:nutrteach@sbcglobal.net)  
Office Hours and Appointments scheduled upon request
- Lab Assistant:** Charlotte Zuber, [czuber@email.unc.edu](mailto:czuber@email.unc.edu)

**III Course Description**

This graduate course is a core requirement for the combined dietetics program. It introduces the principles of food science and food safety in the public marketplace, in healthcare institutions and in the home kitchen. It describes government regulations and regulatory agencies. Students will learn the physiology and psychology of taste, the physical and nutrient composition of foods and the chemical changes that occur during food production, storage, and meal preparation, with emphasis on how these factors influence the quality, taste and nutrient content of the final product.

The labs will teach culinary techniques and introduce a variety of recipes, emphasizing information learned in lecture. Students will learn general principles of choosing, storing and preparing different categories of food in appropriate and appetizing ways, always with an eye to nutrition whether in a clinical healthcare, public health, or home setting. The goal is to offer some idea of the tremendous possibilities we have in the dietetics profession for using food to promote health and healing as well as to provide comfort and pleasure.

At the same time, students will perform comparative physical and sensory tests that illustrate the principles of product development and quality evaluation. Nutrient composition and cost/benefit analysis will be considered.

#### **IV Course Objectives**

The Accreditation Council for Education in Nutrition and Dietetics (ACEND) has identified foundation knowledge and skills that all entry-level dietitians should know no matter which didactic program they complete. The **Foundation Knowledge and Skills** incorporated into this course are:

1. Lay and technical writing
2. Media presentations
3. Interpersonal communication skills
4. Concepts of group dynamics
5. The scientific method
6. Culinary techniques
7. Food and nonfood procurement
8. Food and nutrition laws, regulations and policies
9. Applied sensory evaluation of food techniques
10. Tools used to calculate and interpret nutrient composition of foods
11. Functions of various ingredients in foods

**By the end of this course, students will have demonstrated the ability to:**

1. Learn general principles of food selection and storage
2. Learn the physical and chemical changes occurring in food during preparation and the effects of these changes on the quality of the food.
3. Perform laboratory experiments that illustrate the traditional methods of food preparation and what happens with modifications
4. Prepare basic foods and present them appropriately
5. Work effectively as a team member
6. Use nutrient analysis tools to calculate and interpret the composition of foods
7. Modify a recipe for nutritional or dietary purposes
8. Apply appropriate techniques to conduct sensory evaluation of foods
9. Understand basic culinary terms and techniques
10. Provide a cost analysis of a menu

#### **V Course Guidelines and Classroom Behavior**

Attendance is mandatory for labs as is listening to all recorded lectures; absences requested in advance and excused by instructor or due to illness are exempt. Students will be expected to have read required material for lecture ahead of time and to have prepared for labs where appropriate. The lab book, *Lab Manual for Understanding Food Principles and Preparation, 5<sup>th</sup> Edition* is required and should be brought to each lab. Cell phones must be silent during class.

In lab, students are expected to work quietly and congenially in their assigned groups, showing respect for each other in an attempt to excel at the assigned tasks and complete the lab assignments on time. Long hair should be pulled back or secured with a scarf or cap. Aprons, lab coats or chef jackets are required as are closed-toe shoes. I look forward to this class allowing us to share many flavors and hope that everyone will keep an open mind to tasting. If you have any food restrictions, or you don't feel able or comfortable in tasting certain foods, please discuss the flavor with a lab partner that has tasted the food. Sharp knives and hot surfaces will be used, so it is imperative that everyone pays attention and keeps focused on the work at hand. Each station will work together to develop a nutritious and appetizing meal that complies with NDD1. Accompanying documentation will be required as outlined in assignment.

## VI Grading

### Lectures (465 pts):

- **Listening to recorded Lectures & Answering Quiz questions**– 10 points per class for 13 classes = **130 points**
- **2 Exams based on the lectures = 200**
  - **Midterm**—Due by 2/25= **100 points**
  - **Final** –May 1 = **100 points**
- **Project** – February 26 by 11:59 pm **100 points**

### Food Labs (435 points):

- **Lab attendance** – 5 pts per class for 14 classes = **70 pts**  
The instructor must be notified prior to missing a lab if an excused absence is to be given. If you have an excused absence you must complete a written laboratory report. This report is due within 1 week of the missed lab. Directions for completion of this report are included in the lab manual.
- **Clean kitchen end of class (graded by TA) = 70 points** 5 pts per class, 14 classes
- **Pre-lab questions for each unit = 20 points** (1 pt per lab, due by 1:25 pm of each lab class)
- **1 lab reports (30 pts for report) = 30 points**
- **Food Modification Assignment (NDD1)= 215 points**  
Menu for project due 3/28  
Shopping list for NDD1 menu due 4/18 by midnight  
Final project due and presented to class 4/26

### Grading Scale:

**GRADUATE**  
847 - 900 **H**  
720 -846 **P**  
540 -719 **L**

**UNDERGRADUATE**  
93-100% **A**                    **77-79% C+**  
90-92% **A-**                    **73-76% C**  
87-89% **B+**                    **70-72% C-**

**Below 540 F**

**83-86% B**  
**80-82% B-**

**60-69% D**  
**<69% F**

**VII The Honor Code**

“The Campus Code requires students to conduct themselves so as not to impair significantly the welfares or the educational opportunities of others in the University Community. As a student at UNC-CH, you have accepted a commitment to the Honor Code and the Campus Code and the principles of academic integrity, personal honesty and responsible citizenship, upon which they were founded more than 100 years ago. Academic dishonesty in any form is unacceptable, because it circumvents the purpose of the University.”

The Honor Code is in effect in this class and all others at the University. As a faculty member, I am committed to treating Honor Code violations seriously and urge all students to become familiar with its terms as set out at - <http://instrument.unc.edu>. If you have questions, it is your responsibility to ask me about the Code’s application. All exams, written work and other projects must be submitted with a statement or initials indicating you have complied with the requirements of the Honor Code in all aspects of the submitted work. All exams must be submitted with the following signed statement: On my honor, no unauthorized assistance has been received or given in the completion of this work.

Signature: \_\_\_\_\_

**VIII. Online Course Evaluation:**

UNC uses an online evaluation system to assess the quality of instruction and learning of the courses offered. During the last few weeks of the course, an email will notify you that the system is open with a link to access the form. This evaluation system is anonymous. The instructor will only see the aggregate data with any comments at the end of the course after grades are turned in. You will be sent multiple e-mails until it is completed.

**IX. Required Books**

Brown, Amy; Understanding Food, Principles and Preparation, 5<sup>th</sup> Edition, Cengage Learning, 2015.

Walter, J.M and Beathard, K; Lab Manual Accompaniment to Understanding Food Principles and Preparation, 5th Edition, Cengage Learning, 2015.

**NUTR 650/650L SCHEDULE, SPRING 2018**

**Date   Topic**

**1/17   Lecture #1**

Course introduction  
Review of syllabus  
Food Selection  
Food Evaluation  
Non-Nutritive Food Components  
Food Safety  
Food Preparation Basics  
Meat

**Reading:** Brown, Chapters 1, 2, 3, 4, 5

**1/24   Lecture #2   Meat, Poultry, Fish and Shellfish**  
Brown, Chapter 8 and 9

**Lab #1: Meat, Poultry, fish and shellfish**

**1/31   Lecture #4: Milk and Cheese**

Brown, Chapter 10 and 11

**Lab #4: Milk and Cheese**

**2/7   Lecture #5 Eggs**

**Egg Lab**

Brown, Chapter 12

**2/14   Lecture: #6 Vegetables, Legumes and Fruits**

Brown, Chapter 13 and Chapter 14

**Lab #6: Vegetables, Legumes and Fruits**

**2/21   Lecture: #7 Soups, Salads and Gelatins/Cereals, Grains and Pasta**

Brown, Chapter 15 and 16

**Lab #7: Cereals and Flours**

**\*\*\*MIDTERM EXAM (online)- (Food Selection through Soups/Salads/Grains/Cereals)-Due by 2/25 @ 11:59 pm\*\*\***

**2/28 Lecture #8 Flours and Flour Mixtures, Starches and Sauces**  
Brown, Chapter 17 and Chapter 18

**Lab #8: Starches and Sauces (Unit 12 Lab Book)**

**3/07 Lecture #09: Quick Breads**  
Brown, Chapter 19

**Lab #09: Quick Breads (Unit 13 Lab Book)**

**3/14 Spring Break (No class or lab)**

**3/21 Lecture #10: Yeast Breads**  
Brown, Chapter 20

**Lab: #10 Yeast Breads (Unit 14 Lab Book)**

**\*\*Lab Report Due by 3/25 @ 11:59 pm\*\***

**3/28 Lecture #11: Fats and Oils**  
Brown, Chapter 22

**Lab #11: Fats and Oils (Unit 15 Lab Book)**

**4/01 Menu & Recipes for final project due by 11:59 pm**

**4/04 Lecture #12 Cakes, Cookies and Pastries, Pies**  
Brown, Chapter 23 and Chapter 24

**Lab #12 Cakes and Pastry (Unit 16 & 17 Lab Book)**

**4/11 Lecture #13 Candy and Frozen Desserts**

Brown, Chapter 25 and Chapter 26

**Lab #13: Candy & Frozen Desserts (Unit 18 & 19 Lab Book)**

**4/15 Shopping list for NDD1 project due by 11:55 pm**

**4/18 Lecture #14 Beverages, Food Preservation and Food Regulation, Careers**

Brown, Chapter 27, 28, 29, and 30

**Lab #14: Beverages (Unit 20 Lab Book)**

**4/25 Lecture #15 Prep for meal**

**Lab #15: Lab Project- Meal presented to panel**

**5/1 FINAL EXAM #3 at 8:00 AM (Flour through Beverages)**