

# FN 253 – Introduction to Nutrition and Nutrient Metabolism Spring 2018

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Office hours T W 9-11am

*To meet at a different time, send me an email listing the days and times you are available so I can identify a time we both can meet.*

LECTURE LOCATION AND TIME 08:00-8:50am T RF CPS 116

The best learning strategies are attending lecture, careful note taking of lecture and class discussion, actively participating in class discussion, and strategically reading assigned textbook pages. Be advised to keep up with the material and do not allow yourself to fall behind. As we progress through each topic the material will become increasingly integrated and will require students to apply the basic concepts covered earlier.

## COURSE DESCRIPTION

The course provides students with a fundamental understanding of the functions of nutrients and nutrient metabolism. This information will serve as a background for discussing contemporary health and nutrition issues, such as the basis for current nutrient and dietary recommendations, the relationship between diet and health, and the interaction between diet and physical activity in determining chronic disease risk. Sophomore standing is expected. As a 200 level science course, material is covered with the assumption that students have successfully completed a 100 level college biology course

## STUDENT OBJECTIVES

1. Describe the anatomy, physiology, and biochemistry of nutrient digestion, absorption, and utilization.
2. Explain the role that foods, nutrients, and nutritional status play in chronic disease risk reduction, human performance, and overall well-being.
3. Describe some nutritional needs that differ based on gender, age, genetics and life stage.
4. Explain how personal factors such as ethnicity, culture, socioeconomic status, and environment can affect a person's food choices as they relate to achieving dietary recommendations.
5. Explain how food-based recommendations (MyPlate, DG2015) meet nutrient recommendations (RDA, AI, UL) and reduce chronic disease risk.
6. List common food sources for nutrients that have recommended levels of intake.

Learning objectives 1-6 will be

- achieved by mastering reading and lecture material and engaging in discussions
- assessed via quizzes and exams

7. Investigate the evidence on nutrition claims and apply data from reputable sources to provide a defensible answer to questions about those claims.
8. Design a set of diet and physical activity recommendations for a client that is based on their health and performance goals and national dietary recommendations (DG2015).

Learning objectives 7-8 will be achieved and assessed via written assignments

## ENDURING UNDERSTANDINGS

FN253 is designed to build essential knowledge and skills for health promotion professionals who discuss food and nutrition with individuals and/or groups. This course begins to transform the student perspective from one of a consumer to that of a professional. Students will develop the professional understandings below through class discussions, lecture take-home messages, and assigned written work.

1. There is no one perfect diet.
2. No single food makes or breaks a diet. In other words, integrating a less healthful food (e.g., Big Mac) does not make a person's entire diet unhealthy. Similarly, consuming 1 more healthful food (e.g., salmon) or eliminating 1 less healthful food (e.g., bologna) does not make a diet healthful overall. The healthfulness of the diet is based on the balance of numerous foods consumed regularly.
3. Food and nutrient recommendations are not prescriptions or strict rules. Recommendations (e.g., My Plate) are general guidelines that can be achieved through numerous combinations of foods. Professionals help clients use these evidence-based recommendations as a point of reference for making healthy food choices that are consistent with personal preferences (i.e., taste, texture), cultural traditions, religious beliefs, economic circumstances, and logistical realities (i.e., access).
4. Reliable nutrition recommendations are based on decades of research from multiple lines of evidence. Recommendations therefore do not change quickly or often.
5. While foods can be grouped into categories (fruits, vegetables, grains), these distinctions are often less important than the foods' other characteristics (degree of processing, energy density, nutrient density). For example, it is less important to discuss whether a tomato is a fruit or a vegetable or beans are a vegetable or "protein" than to be clear that ketchup and corn flakes are more processed than whole tomatoes and corn.
6. While there are diagnostic criteria for health conditions (diabetes, obesity, hypertension), indicators of health (blood sugar, fatness, blood pressure) occur along a continuum of lower to higher. For most people, lifestyle choices (diet, physical activity, smoking, stress management, etc.) can shift their place along that continuum and as a result change their disease risk.
7. Preventable chronic disease risk (CVD, type II diabetes) is multifactorial, thus one is not "unhealthy" based only on the presence of one risk factor (e.g., body weight).

## WHAT STUDENTS CAN DO TO BE SUCCESSFUL IN THIS CLASS

1. Take ownership of your education and learning experience.
2. Take notes from the lectures in the outlines provided.
3. Complete the study guides, take quizzes, and achieve the learning outcomes for each reading assignment.
4. Actively engage in discussions.
5. Reach out to the instructor using your UWSP email, scheduled office hours, or in person whenever you have questions or problems with an assignment, the material, or anything else about the course. Feel free to connect whenever you want to explore a topic further or to discuss how to apply the material in different ways.

## TEXT

NUTRITION: CONCEPTS & CONTROVERSIES,Sizer, 13<sup>th</sup> edition [Available at text rental.](#)

There is some required reading. The assigned pages are listed in the outlines posted in D2L for each topic and will be part of the content covered on exams. In addition, the text is a valuable resource for students to easily look up unfamiliar terms and provide visuals and explanations of the material that can enhance your mastery of the concepts covered in class. Thus, it is a reliable independent learning tool for students to use. With that said, students must know that the lecture material is NOT based on the textbook. Therefore, students are advised to NOT rely on the textbook as their sole resource for making up missed lectures.

## ATTENDANCE

Students should plan to attend all class sessions and are responsible for all information presented in class. **It is the student's responsibility to obtain any lecture notes or other information from missed class sessions from other students, not from the instructor.** Once class material is obtained from other students, you can make an appointment with the instructor to discuss and clarify the material.

## COURSE FORMAT

This is a face-to-face course that uses an online course management platform, D2L, to enhance the learning experience. The following will ensure you have access to all course materials and learning opportunities:

- Attend all class sessions to obtain lecture information and hear course announcements
- Check your UWSP email account daily to get any additional information about assignments, exams, lectures, and professional resources.
- In D2L, you will access course resources and materials as well as assignments and quizzes.
- When accessing course content with your personal computer, be sure it has the recommended personal computer configurations [D2L settings link](#).

## TECHNICAL ASSISTANCE

To get technical assistance or report a problem with D2L at any time during the course, you can contact:

a [Student Technology Tutor](#)

the [HELP Desk](#)

- **phone** 715-346-3568
- **e-mail** [tlctutor@uwsp.edu](mailto:tlctutor@uwsp.edu)
- **visit** 018 Albertson Hall (ALB)
- **phone** 715-346-HELP (4357); 1-877-832-8977
- **e-mail** [techhelp@uwsp.edu](mailto:techhelp@uwsp.edu)
- **visit** ALB 027

## ASSIGNMENTS

Students will complete 3 assignments that involve current events in food and nutrition. The assignments are designed to build critical thinking skills. Two also build confidence accessing reliable sources of information and applying that information with care to address a client's question. Point values for worksheets are posted in D2L.

## QUIZZES

Quizzes will be available in D2L for each topic area to enhance your learning. Each quiz can only be taken once. Quiz grades are NOT factored into the overall course grade. Taking the quizzes gives you feedback on how well you have mastered some of the the material and what areas you need to revisit before the exam.

## EXAMS

Exam questions will be drawn from lecture material, class discussions, and assigned reading. Be advised that exams can cover anything covered in lecture, including take home messages and major points of discussion from spontaneous questions. Topic outlines will be posted in D2L to provide some lecture material, support complete note taking, and focus your studying.

A student must notify the instructor, prior to an exam, if s/he will be absent. Without prior notification, exams cannot be made up. Should you feel that an exam has been unfairly graded, you will have 1 week from the day of the exam to request a regrade. After 1 week, no test will be accepted for regrading. **The final exam (exam 4) is NOT cumulative.**

**If you have any questions or concerns about meeting the requirements of this course as stated above, please contact the instructor to discuss your questions and concerns.**

*If modifications are required due to a documented and verified disability, please inform the instructor and contact the Disability and Assistive Technology Center: 609 Learning Resource Center; phone (715) 346-3365 (Voice) (715) 346-3362 (TDD only) or email at [datctr@uwsp.edu](mailto:datctr@uwsp.edu)*

## LATE WORK POLICY

Be sure to pay close attention to deadlines:

- Assignments will be docked 1 full letter grade for each day late
- Exams cannot be made up without a serious and compelling reason and instructor approval.
- Because quizzes are available for several weeks and they close immediately before the exam they are intended to help student prepare for, they cannot be taken after the deadline.

## RELIGIOUS BELIEFS

Relief from any academic requirement due to religious beliefs will be accommodated according to UWS 22.03, with notification within the first three weeks of class.

## GRADING

### COMMIT TO INTEGRITY: UWSP 14.01 STATEMENT OF PRINCIPLES

The board of regents, administrators, faculty, academic staff and students of the University of Wisconsin system believe that academic honesty and integrity are fundamental to the mission of higher education and of the University of Wisconsin system. The university has a responsibility to promote academic honesty and integrity and to develop procedures to deal effectively with instances of academic dishonesty. Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for

#### Grades (% of total grade)

1. Exams (75%)
2. Assignments (25%)
  
3. Extra credit – see instructions in the Course Information folder of D2L

Grading Scale			
A	93-100%	C+	77-79.9%
A-	90-92.9	C	73-76.9
B+	87-89.9	C-	70-72.9
B	83-86.9	D+	67-69.9
B-	80-82.9	D	60-66.9
		F	below 60%

## FOR DIETETICS STUDENTS

The Commission on Accreditation for Dietetics Education (CADE) is the American Dietetic Association's accrediting agency for education programs that are preparing students for careers as registered dietitians. CADE serves and protects the public by assuring the quality and continued improvement of nutrition and dietetics education programs. The UWSP dietetics curriculum is planned to provide learning activities to attain all the CADE Foundation Knowledge and Learning Outcomes required for graduates to be qualified to enter a Dietetic Internship for eligibility for the RD examination.

FN253 addresses the following aspects of CADE Knowledge Requirements and Learning Outcomes. These build on previous coursework and provide the basis for higher level courses in the curriculum.

Curricular Area	Knowledge Requirement	Learning Outcome	Outcome Assessment
1. Scientific and Evidence Base of Practice: integration of scientific information and research into practice	KR 1.1 Understand the scientific basis of the dietetics profession including research methodology, interpretation of research literature, integration of research principles into evidence-based practice.	KR 1.1.a Students locate, evaluate and use professional literature to make ethical evidence-based practice decisions.	Assignments
<b>Portfolio material:</b> One assignment that pertains to KR 1.1 is a required artifact for your dietetics portfolio. It is the student's responsibility to keep an electronic copy of all assignments, including group work.			
2. Professional Practice Expectations: beliefs, values, attitudes and behaviors for the professional dietitian level of practice	KR 2.1 Develop communication skills sufficient for entry into pre-professional practice.	KR 2.1.a Effectively write and documentation and use of current information technologies when communicating with individuals, groups and the public.	Assignments
3. Clinical and Customer Services: development and delivery of information, products and services to individuals, groups and populations	KR 3.2 Understand the role of environment, food, nutrition and lifestyle choices in health promotion and disease prevention.	KR 3.2.a Apply knowledge of the role of environment, food and lifestyle choices to develop interventions (answer client questions) to affect change and enhance wellness in diverse individuals and groups.	Exams and assignments
4. Practice Management and Use of Resources: strategic application of principles of management and systems in the provision of services to individuals and organizations	KR 4.3 Understand the fundamentals of public policy, including the legislative and regulatory basis of dietetics practice.	KR 4.3.a Demonstrate knowledge of the impact of a public policy position on dietetics practice.	Exams and assignments

COURSE SCHEDULE

WEEKS	TOPICS	ACTIVITY	DUE DATE: <b>BY 12 MIDNIGHT</b>
Weeks 1-2	Introduction to nutrition, nutrients, and dietary recommendations	Intro quizzes	Wed, Feb 14 <sup>th</sup>
Weeks 2-3	Digestion, absorption & transport	<b>In Defense of Food</b> In-class discussion Dig quizzes	<b>Tuesday, Feb 6<sup>th</sup></b> Wed, Feb 14 <sup>th</sup>
Weeks 4-6	<b>Exam #1 – Thursday, Feb 15<sup>th</sup></b> Carbohydrates	In-class discussion CHO quizzes	Wed, March 14 <sup>th</sup>
Week 7-8	Lipids <b>Exam #2 – Thursday, March 15<sup>th</sup></b>	<b>HFCS</b> In-class discussion Lipid quizzes	<b>Tuesday, March 6<sup>th</sup></b> Wed, March 14 <sup>th</sup>
Week 9	Protein	In-class discussion <b>5HE</b> Lipid quizzes	<b>Tuesday, April 10<sup>th</sup></b> Monday, April 16 <sup>th</sup>
Week 10-11	Energy metabolism & body weight <b>Exam #3 – Tuesday, April 17<sup>th</sup></b>	In-class discussion E metab quizzes	Monday, April 16 <sup>th</sup>
Weeks 12-14	Micronutrients: vitamins & minerals	In-class discussion Micronut quizzes	Monday, May 14 <sup>th</sup>
Week 14-15	Water & electrolytes	In-class discussion Water quizzes	Monday, May 14 <sup>th</sup>

*Extra credit must be turned in by 5pm on the last day of class: Friday May 11<sup>th</sup>*

Final Exam 5/15/2018	<b>Exam #4 – Tuesday, May 15<sup>th</sup> 10:15AM - 12:15PM, CPS 116</b>
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