

# FN 253 – Introduction to Nutrition and Nutrient Metabolism

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Office hours Mondays 12-2pm and Tuesdays 9am-12pm

*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, DG2020) 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 (DG2020).

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 guide and achieve the learning outcomes for each reading assignment.
4. Actively engage in discussions.
5. Whenever you have questions or problems with an assignment, the material, or anything else about the course, reach out to the instructor using your UWSP email or Canvas message, ask in class, stop in during office hours, or schedule another time to talk via phone or Zoom. Feel free to connect whenever you want to explore a topic further or to discuss how to apply the material in different ways.
6. Stay connected with the course by turning on email/text notifications. Go to the Account tab at the far left, hit settings to enter your email and cell phone in "ways to contact" and then hit notifications to tell Canvas to alert you of due dates, announcements, grades posted, etc. Hit Notifications (back in the Account menu on the left) and choose which course details you want to get reminders about and when you get the alerts.

## TEXT

NUTRITION: CONCEPTS & CONTROVERSIES,Sizer, 14<sup>th</sup> edition Available at text rental and in Canvas.

There is some required reading. The assigned pages are listed in the outlines posted in CANVAS 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, CANVAS, 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 CANVAS, 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 [CANVAS settings link](#).

## TECHNICAL ASSISTANCE

To get technical assistance or report a problem with CANVAS 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 2 assignments that involve current events in food and nutrition. The assignments build critical thinking skills. One also builds 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 CANVAS.

## PRACTICE QUIZZES

**Practice quizzes** are available in CANVAS for each topic area so you can gauge how well you are learning the material. Each quiz can **only be taken once**. Feedback in Canvas about a quiz is available ONLY immediately after you take the quiz. If you want to discuss any questions to better understand the material, contact the instructor to go over your quiz. Quizzes **do NOT count** towards your course grade.

Quizzes for a topic are available until 11:59pm the night before the scheduled exam that will cover that topic. Taking quizzes gives you feedback on how well you have mastered some (but not all) of the material and what areas you need to revisit before the exam. While some **exam** questions are based on the quizzes, the exams will contain unique questions that challenge you to apply the material in a new way.

## EXAMS

There are 4 exams that will be taken from 8-8:50am in CPS 116 on the scheduled dates in the course outline. 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 in class. Topic outlines will be posted in CANVAS to provide some lecture material, support students in taking detailed and complete lecture notes, and help 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.

If you want to understand which questions you got wrong and why, contact the instructor to go over your exam. 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. **Exams cannot be retaken.**

**The final exam 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.
  - Students must notify the instructor no later than **12 hours PRIOR** to the exam due date about the rare, unexpected, and extenuating circumstances that interfere with taking the exam.
  - The instructor will consider the circumstances and decide whether to grant an extension.
- Because quizzes are available for several weeks and they are intended to help student prepare for the exams, they cannot be taken after they close.

## 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 – a **maximum of 15pts** extra credit can be earned (see detailed instructions in CANVAS)

### 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%

### Tips for success:

1. Read the learning outcomes at the beginning of each outline so you know where each topic is going.
2. Before each class session, go over the material from last lecture and read the next couple of pages of the outline to familiarize yourself with what will be covered next.
3. Take notes in class on the lecture material presented. Take notes within the outline provided or separately. If you take notes separately, be sure to integrate the notes you take into the outline so that ALL the information you need to know is in one place.
4. Complete the study guide and achieve the learning outcomes for each topic (at end and beginning of each outline) and each reading assignment.
5. Whenever you have questions about the material, ask the instructor for clarification.
6. Plan additional time to master the material on your own by doing these things
  - a. be able to EXPLAIN the material, don't just memorize the words
  - b. take practice quizzes and revisit material you missed on the quizzes
  - c. review all the content that was not covered in the study guide and quizzes
7. If you are unclear about a quiz or exam question, contact the instructor to discuss further.

**You can only take each practice quiz ONCE**

Practice quizzes for a topic

Are available until midnight before the scheduled exam

Help you see how well you are mastering the material and what you need to study more for the exam

Quiz feedback is available ONLY right after you take the quiz, so view it right away

## COURSE SCHEDULE

DATES & TIME FRAMES	TOPICS	ACTIVITY	Due Dates
Days 1 & 2  Thurs Sept 2 & Fri Sept 3	Course overview: student and instructor expectations  Introductory material – first 2 lectures	Syllabus quiz in Canvas  Listen to and take notes on video lectures	<b>By 11:59pm Thurs Sept 2 to see course content, you must pass the quiz</b>  <b>Before Tues Sept 7</b>
Weeks 2-3	Introduction to nutrition, nutrients, and dietary recommendations	<b>In Defense of Food</b>  Intro quizzes	<b>Thurs, Sept 16 by 11:59pm in CANVAS dropbox</b>  Wed Sept 22 by 11:59pm
Weeks 3-4	Digestion, absorption & transport	Dig quizzes  <b>Exam #1</b>	Wed Sept 22 by 11:59pm  <b>Thursday, Sept 23</b>
Weeks 4-6	Carbohydrates	<b>HFCS</b>  CHO quizzes	<b>Thurs, Oct 14 by 11:59pm in CANVAS dropbox</b>  Monday, Oct 18 by 11:59pm
Week 7-8	Lipids	Lipid quizzes  <b>Exam #2</b>	Monday, Oct 18 by 11:59pm  <b>Tuesday, Oct 19</b>
Week 9	Protein	Protein quizzes	Wed, Nov 10 by 11:59pm
Week 10-11	Energy metabolism & body weight	E metab quizzes  <b>Exam #3</b>	Wed, Nov 10 by 11:59pm  <b>Thurs, Nov 11</b>
Weeks 12-14	Micronutrients: vitamins & minerals	Micronut quizzes	Sunday, Dec 12 by 11:59pm
Week 14-15	Water & electrolytes	Water quizzes	Sunday, Dec 12 by 11:59pm

***Extra credit must be turned in by 5pm on the last day of class: Friday Dec 10***

<b>Final Exam 12/13/2021</b>	<b>Exam #4 – Monday, December 13 8:00 - 10:00 AM CPS 116</b>
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### 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	Outcome Assessment
1. Scientific and Evidence Base of Practice: integration of scientific information and research into practice	KRDN 1.2: Use current information technologies to locate and apply evidence-based guidelines and protocols.	Assignments
	KRDN 1.3: Apply critical thinking skills.	Exams and assignments
<p><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.</p>		
2. Professional Practice Expectations: beliefs, values, attitudes and behaviors for the professional dietitian level of practice	KRDN 2.1: Demonstrate effective and professional oral and written communication and documentation.	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.	Exams and assignments