

## 0704N112

### Principles of Nutrition

**Instructor:** Roman Pawlak, Ph.D, RDN

**Time:** May 10, 2021-June 11, 2021

**Contact with instructor and teaching assistant:** available via e-mail

**Office Hours:** 2 hours (according to the teaching schedule)

**Contact Hours:** 60 (50 minutes each)

**Credits:** 4

#### Correspondence with the instructor

Students are encouraged to contact the instructor with question and issues related to the course. In addition, students can contact the Teaching Assistant for help. We will do our best to reply to students' mails as soon as possible and no later than within 24 hours from receiving them.

#### Course Description

This course is designed to study elementary principles of nutrition and their practical application. The objectives include providing an overview of the scientific principles of nutrition, summarize digestion and metabolism of nutrients, discuss the role nutrients play in human anatomy, physiology, and disease prevention, summarize age and life stage specific nutritional requirements, and overview the role nutrition plays in prevention of aging and age-related chronic health conditions.

#### Textbook Information

You will have the opportunity to read a course pack document available to you free of charge via Moodle as part of preparation for instruction covered in lecture recordings and as independent study outside of instructor's lecturing. The course pack is available to you as a pdf file on Moodle.

## Course Objectives

Measurable Course Objectives are outcomes students are expected to achieve by the end of the course.

- Identify the forces that influence an individual's eating pattern.
- Demonstrate knowledge of the dietary goals and guidelines set for Americans by listing these guidelines and specifying ways to implement them into the planning of healthful diets.
- Analyze the nutritional adequacy of daily food intake by calculating the daily intake of specific nutrients and comparing them to an established standard and identifying alternative diet plans.
- Identify food myths, fads, and fallacies and why each is incorrect. Demonstrate understanding of how to read and interpret food labels.
- Explain how DRIs are developed and outline their role in healthful diet planning.
- Describe the process of digestion, absorption and metabolism. This includes identifying parts of the digestive system, describing the mechanical and enzymatic activities involved in digestion, and discussing the hormonal regulation of the digestive processes.
- Demonstrate a comprehension of carbohydrates, lipids, and protein by discussing their structure, classifications, function, and dietary sources. Identify the association between the three energy-yielding nutrients and disease.
- Demonstrate a comprehension of energy balance and weight control. Discuss prudent ways to manage body weight. Outline the association between abnormal body weight and selected co-morbidities.
- Demonstrate a comprehension of selected water-soluble and fat-soluble vitamins by describing their individual and collective functions, requirements, dietary sources, deficiency and toxicity symptoms.
- Demonstrate a comprehension of selected minerals by describing their functions, requirements, dietary sources, deficiency and toxicity symptoms.
- Demonstrate knowledge of nutritional requirements throughout the life cycle by listing the specific nutrient needs of pregnancy, lactation, infancy, childhood, adolescence, adult life, and in older adults.

## **Course Schedule**

Please note that the schedule is meant to give an overview of the major concepts of this course. Changes may occur in this calendar as needed to aid in the student's development.

### **Week 1**

- Course introduction
- Introduction to nutrition and nutrients
- Dietary guidelines and principles
- Fed diets. How to recognize prudent health and nutrition information
- Basic principles of nutrition research
- Digestion: From Meals to Molecules
- Exam 1

### **Week 2**

- Carbohydrates. Sugars, starches, and fibers
- Lipids: Fats, Phospholipids, and Sterols
- Proteins: amino acids, enzymes, hormones, and more
- Health effect of macronutrients
- Exam 2

### **Week 3**

- Water- and fat-soluble vitamins
- Water, macro and trace minerals
- Energy and nutrient metabolism
- Energy balance and weight management
- Eating disorders
- Exam 3

#### **Week 4**

- Vegetarian diets
- Nutrition and athletic performance
- Nutrition in disease prevention and treatment
- Nutrition in the lifecycle. Pregnancy, lactation, infancy and children
- Nutrition in the lifecycle. Adults

#### **Week 5**

- Nutrition in the lifecycle. Elderly, oldest old and centenarians
- Issues in food safety
- Malnutrition around the world
- Final exam

### **Course Requirements**

- Required regular textbook reading
- Required course assignments to be completed and submitted before the due date

### **Grading Policy**

**Grades will be determined based on the following:**

- **Exams 50% of the final grade**

Four exams (3 weekly and one final) will be given throughout the semester. Please note that each exam is comprehensive, meaning that each exam will be based on all lectures and course pack/textbook readings from the beginning of the semester until the time the exam is offered. The same applies to the final exam. All exams are offered via Moodle, including the final exam. You will have one attempt to take the Moodle-based exams and there will be a time limit to submit them (please check Moodle for details). The table below includes information regarding the content of each exam, time period during which each exam will be offered, and the percentage of the final grade each exam is worth.

<b>Exam #</b>	<b>Content</b>	<b>Date exam becomes</b>	<b>Date by which exam must be</b>	<b>Grade</b>
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		available	completed	
<b>Exam 1</b>	Lectures from week 1 and course pack reading chapter 1-4	05/14	05/16	5%
<b>Exam 2</b>	Lectures from week 1 and 2 and course pack reading chapter 1-8	05/21	05/23	10%
<b>Exam 3</b>	Lectures from week 1, 2, and 3 and course pack reading chapter 1-12	05/28	05/30	15%
<b>Final exam</b>	All lectures and all chapters from the course pack reading	06/10	06/11	20%

Please, **ALWAYS** use the “**PrtScn**” (print screen) feature on a keyboard of the confirmation page that you submitted the exam. Also, if you have a problem while taking the exam (e.g. internet outage) use the Print Screen option to document the problem. Attach it to an e-mail and send it to me.

- **Quizzes based on course pack/textbook reading 35%**

Students will have the opportunity to read the course pack and earn a credit for each reading assignment by taking Bb-based quizzes. There will be a deadline for taking each quiz (see the table below). Students will not be permitted to take quizzes after the deadline except in cases of prolong illness, hospitalization and other extreme circumstances. Short-term issues, such as having a cold, headache or stomach problem, do not constitute a valid reason to have the deadline extended. Each quiz is set up for 3 attempts with the highest grade of the attempts that will be counted toward the grade.

Quiz	Date the quiz becomes available	Date by which the quiz has to be submitted*	Weighted grade
<b>Quiz 1</b>	05/10	05/13	1%
<b>Quiz 2</b>	05/10	05/14	2%
<b>Quiz 3</b>	05/10	05/15	2%
<b>Quiz 4</b>	05/10	05/16	2%
<b>Quiz 5</b>	05/16	05/17	2%
<b>Quiz 6</b>	05/16	05/18	2%
<b>Quiz 7</b>	05/16	05/20	2%

Quiz 8	05/16	05/21	2%
Quiz 9	05/23	05/24	2%
Quiz 10	05/23	05/25	2%
Quiz 11	05/23	05/27	2%
Quiz 12	05/23	05/28	2%
Quiz 13	05/30	05/31	2%
Quiz 14	05/30	06/01	2%
Quiz 15	05/30	06/03	2%
Quiz 16	05/30	06/04	2%
Quiz 17	06/06	06/07	2%
Quiz 18	06/06	06/09	2%

\*the quiz will be available until midnight of the date listed in the table

- **Assignment 1 – diet analysis/healthy eating index 10%**

Use the MyPlate pictorial dietary recommendation along with the Healthy Eating Index (HEI) guidelines, evaluate your own diet in terms of diet quality. Discuss the degree your diet is consistent with the dietary guidelines represented by the MyPlate and HEI. Propose changes to your diet in order to improve your diet quality to be more consistent with the MyPlate and HEI guidelines. The deadline to submit a check list document with the link to the completed assignment is **May 28**.

- **Assignment 2 – create an educational video 5%**

Students will have the opportunity to create a short video recording in which important nutrition is to be discussed. Please view a sample, read instruction, topics (pick one) and grading criteria uploaded on Moodle. Students will submit a check list document that will include a hyperlink to the MP4 video they have created (you can upload it on youtube.com and include a link to that youtube link). The deadline to submit a check list document with the link to the completed assignment is **June 04**.

**Please, ALWAYS use the “PrtScn” (print screen) feature on a keyboard (and/or take a picture with you smart phone) to copy the confirmation of the study guide submission. If, for some reason, I have not received your study guide, you will only be allowed to resubmit the assignment after the deadline when you show a picture of the submission confirmation page.**

## Grading Scale

The instructor will use the grading system as applied by JNU:

Definition	Letter Grade	Score
Excellent	A	90~100
Good	B	80~89
Satisfactory	C	70~79
Poor	D	60~69
Failed	E	Below 60

## Course Outline

Please note that the schedule is meant to give an overview of the major concepts of this course. Changes may occur in this calendar as needed to aid in the student's development.

### Week 1

- Course introduction
- Introduction to nutrition and nutrients
- Introduction of dietary assessments
- Nutrition: every day choices
- Dietary guidelines and principles
- Basic principles of nutrition research
- Fed diets. How to recognize prudent health and nutrition information
- How to understand food labels
- Digestion: From Meals to Molecules
- Carbohydrates. Sugars, starches, and fibers
- **Exam 1**

## **Week 2**

- Lipids: Fats, Phospholipids, and Sterols
- Proteins: amino acids, enzymes, hormones, and more
- Health effect of macronutrients
- Energy balance and weight management
- Eating disorders
- **Exam 2**

## **Week 3**

- Energy and nutrient metabolism
- Water- and fat-soluble vitamins
- Vegetarian diets
- Nutrition and athletic performance
- Issues in food safety
- **Exam 3**

## **Week 4**

- Water, macro and trace minerals
- Water and alcohol
- Nutrition in disease prevention and treatment
- Nutrition in the lifecycle. Pregnancy, lactation, infancy and children
- Nutrition in the lifecycle. Adults

## **Week 5**

- Nutrition in the lifecycle. Elderly, oldest old and centenarians
- Malnutrition around the world
- **Final exam**



## **Policies**

### **1. Grades**

The final grades will be based on grades achieved from all exams, quizzes, lecture notes and assignments. There will be no extra credits assignments given. No grade will be dropped.

### **2. Exams**

If you do get permission to take an exam at a different time you will be expected to take it within a week from the original date.

### **3. Academic honesty**

Any violation of academic integrity will result in automatic failure of the course. Violation of academic integrity includes among other things lying and cheating (copying information from the internet for an assignment is a form of cheating). You are to take each exam individually. Taking it and discussing it with another student constitutes cheating. Honesty is expected at all times.

### **4. Professionalism**

Students are expected to act professionally at all times. This includes referring to the instructor, teaching assistant and other students with respect and courtesy.

## **Academic Integrity**

As members of the Jinan University academic community, students are expected to be honest in all of their academic coursework and activities. Academic dishonesty, includes (but is not limited to) cheating on assignments or examinations; plagiarizing, i.e., misrepresenting as one's own work any work done by another; submitting the same paper, or a substantially similar paper, to meet the requirements of more than one course without the approval and consent of the instructors concerned; or sabotaging other students' work within these general definitions. Instructors, however, determine what constitutes academic misconduct in the courses they teach. Students found guilty of academic misconduct in any portion of the academic work face penalties that range from the lowering of their course grade to awarding a grade of E for the entire course.