Advanced Nutrition and Human Metabolism

FN 457 Fall 2023

INSTRUCTOR

Annie Wetter, PhD
CPS 236 Tel.: 346.2108 E-mail: awetter@uwsp.edu
Office Hours: please stop by or reach out to make an appointment that fits your schedule

COURSE DESCRIPTION

The course provides an integrated study of normal nutrient function and utilization in humans. Although the course focus is normal metabolic functioning, for the purpose of contrast we will discuss the metabolic characteristics of conditions relevant to dietetics, including (but not limited to) diabetes, hyperlipidemia, hypertension and the effect of exercise training.

STUDENT OBJECTIVES

1. Integrate physiology, biochemistry and nutrition in the context of normal human metabolism.
2. Describe the metabolic basis for contemporary health issues relevant to the dietetics professional.
3. Discuss the current research evidence on individual and groups variability in health risk response to interventions such as diet and physical activity.
4. Employ critical thinking strategies in applied problem-solving exercises and discussions.
    - Objectives 1-5 will be achieved by mastery of lecture and reading materials
        - Achievement of these objectives will be reflected in exam performance.
5. Develop professional writing skills in client and consumer education.
6. Develop skills to research, review, and evaluate scientific literature.
    - Objectives 6-7 will be achieved in the abstract writing assignments and exams.
        - Assessment of skill development – see grading rubric for writing assignments.

LECTURE LOCATION AND TIME **CPS 229 M W 14:00–15:15**

REQUIRED TEXT (available at text rental) ADVANCED NUTRITION & HUMAN METABOLISM 8th Edition, Gropper and Smith. 2022; Cengage

Course Evaluation	
2 Writing assignments	50 pts
2 Exams	200 pts
In-class writing, discussions	5-15 pts ea
Total	**~330 points**

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%

STUDENT RESPONSIBILITIES

Attendance

Students should plan to attend all class sessions and are responsible for all information presented in class. Notify the instructor in person, by telephone or email if an absence is anticipated. It is the student's responsibility to obtain any lecture notes or other information from the missed class session by viewing the recorded lecture posted in Canvas and from other students, not from the instructor. Only after such material is obtained can an appointment be made with the instructor to discuss and clarify the information presented in the missed class session.

Exams

Exam questions can be drawn from lecture, textbook and journal article material. A student must notify the instructor, prior to a test, if they will be absent. Without prior notification, exams cannot be made up. Should you feel that an exam has been unfairly graded, you will have one week from the day exams are handed back to request a regrade of the exam. After the one-week period, no test will be accepted for regrading.

Reading Assignments
Relevant chapters are listed in this syllabus. Specific page assignments will be provided in topic outlines. Supplemental print material (research articles) will be distributed throughout the semester along with specific page reading and discussion assignments. Students will be given ample notice of the expectations to participate in class discussions surrounding a reading assignment.

Written Assignments
In-class writing assignments must be written legibly. Illegible work will not be graded.

Out-of-class written work must be word-processed, double-spaced with no more than 1" margins, and written in complete sentences with proper punctuation, grammar and spelling. Writing style will be professional yet accessible to the consumer. Effective professional writing by nutrition educators style has the following characteristics: logical flow of ideas; section and subsection headings; focused topic useful to a defined audience; clearly stated purpose / learning objectives; actionable recommendations for the reader; reading level for consumers (6th grade preferred, no higher than 8th grade); all technical terms and concepts are defined and described (i.e., the reader is not assumed to poses technical, medical, nutrition, or health knowledge); scientific accuracy; citations for reliable, professional sources. Promptness is expected for all assignments due to the instructor. Late assignments which have not been discussed with the instructor prior to the deadline will be docked 1 full letter grade for each day the assignment is late.

Discussions
In-class discussions will take place weekly on assigned readings provided in Canvas. The reading assignments will have learning objectives that students will achieve prior to attending class. Students will demonstrate their learning and communication skills in the class discussions on the reading material. Any missed discussions cannot be made up. However, half the points may be earned by substitute written work.

Please see me if you have any questions or concerns about meeting the requirements of this course as stated in the syllabus.

LEARNING ENVIRONMENT
Rights and Responsibilities
UWSP values a safe, honest, respectful, and inviting learning environment. The *Rights and Responsibilities* document explains how instructors and students are expected to maintain this environment. For more information go to: http://www.uwsp.edu/stuaffairs/Pages/rightsandresponsibilities.aspx

Academic Integrity
Academic integrity is central to the mission of higher education and dishonesty is not tolerated. Please refer to the UWSP "Student Academic Standards and Disciplinary Procedures" section of *the Rights and Responsibilities* document, Chapter 14. http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/SRR-2010/rightsChap14.pdf

Special Accommodations
If you require classroom and/or exam accommodations, please register with the Disability Services Office and then contact the instructor at the beginning of the course.

FN457 addresses the following CADE Core Knowledge requirements:

Curricular Area	Knowledge Requirement	Outcome Assessment
Domain 1. Scientific and Evidence Base of Practice	*KRDN 1.1 Demonstrate how to locate, interpret, evaluate and use professional literature to make ethical, evidence-based practice decisions.	assignments
	KRDN 1.2 Select and use appropriate current information technologies to locate and apply evidence-based guidelines and protocols.	assignments
	*KRDN 1.3 Apply critical thinking skills.	exams, assignments
Domain 2. Professional Practice Expectation	*KRDN 2.1 Demonstrate effective and professional oral and written communication and documentation.	exams, assignments
Domain 3. Clinical and Client Service	KRDN 3.5 Describe concepts of nutritional genomics and how they relate to medical nutrition therapy, health and disease.	exams, assignments
* KRDN is assessed for ACEND accreditation		

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Tentative Course Outline* – Fall 2023

Each week's activities will be structured as follows:

Mondays: lecture on content; in-class writing exercise
Wednesdays: in-class discussion on assigned reading; lecture on content

Week	Topics	Related chapter
Week 1 Sept 6	*Introduction to the course*	
Weeks 2-3 Sept 11-20	Cellular biology and nutrigenomics	Ch. 1
Week 4 Sept 25 & 27	Digestion & the GI tract	Ch. 2
Week 5 Oct 2 & 4	Carbohydrates *Newsletter article: draft due (Oct 4)*	Ch. 3 & 4
Week 6 Oct 9 & 11	Energy metabolism	Ch. 8
Week 7 Oct 16 & 18	Lipids *Newsletter article*: *publishable version due (Oct 18)*	Ch. 5
Week 8 Oct 23 & 25	***Exam I (Oct 23)***	
Week 9 Oct 30, Nov 1	Protein	Ch. 6
Week 10 Nov 6 & 8	Fluid balance & HTN *Blog post: draft due (Nov 8)*	Ch. 12
Week 11 Nov 13 & 15	Trace minerals	Ch. 13
Week 12 Nov 20	*Blog post: publishable version due (Nov 22)* ***Thanksgiving!!!***	
Week 13 Nov 27 & 29	Major minerals	Ch. 12
Week 14 Dec 4 & 6	Fat soluble vitamins	Ch. 10 & 11
Week 15 Dec 11 & 13	Water soluble vitamins	Ch. 9
Wed Dec 20	***Exam II*** CPS 229 2:45AM - 4:45PM	
** The instructor reserves the right to alter the course schedule and assignments as needed.*		