

Advanced Nutrition and Human Metabolism

FN 457 Fall 2021

INSTRUCTOR

Annie Wetter, PhD

CPS 236

Tel.: 346.2108

E-mail: awetter@uwsp.edu

Office Hours: 12-2pm Mondays; 9am-12pm Tuesdays

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. Students will draw on foundation knowledge acquired in or refer to resources from the following prerequisite courses: Chem 260 (biochem) and Bio 285 (physiology).

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. Recognize clinical assessments of metabolic functioning.
4. Discuss the molecular basis for individual response to intervention (diet, physical activity, medication).
5. 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.
6. Develop scientific and professional writing skills.
7. 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 7th Edition, Gropper and Smith. 2018; Wadsworth

Course Evaluation	
2 Abstracts	50
1 Blog post	25
3 Quizzes	150
Various in-class writing exercises	5-15 pts ea
Total	~300

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 given in lecture and supplemental print material will be distributed throughout the semester. Students will be given ample notice of the expectations to participate in class discussions surrounding a reading assignment.

Written Assignments

In-class writing assignments should 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 formal with the aim of developing a professional writing style. Some characteristics of the biomedical style of scientific writing will be employed, including proper in-line citations and bibliography. Promptness is expected for all assignments due to the instructor or writing partner. 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.

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.

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.

FN457 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 and future professional development.

Curricular Area	Knowledge Requirement	Learning Outcome	Outcome Assessment
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 document sources, and use current information technologies when communicating with individuals, groups and the public.	Exams, writing assignments
5. Support Knowledge: knowledge underlying the requirements 1-4.	SK 5.2. The physical and biological science foundation of the dietetics profession must be evident.	Course content includes biochemistry, physiology, genetics, statistics, and nutrient metabolism.	Exams, writing assignments
Evaluation criteria (grading rubric) Exam answers are assessed on accuracy, grammar, relevance, concision, logical flow of ideas, and professional level language. Abstracts and blogs are similarly graded with the addition of original expression (i.e., absence of plagiarism) and adherence to author guidelines (e.g., word limit, structural requirements).			

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Tentative Course Outline* – Fall 2021

Week	Topic of discussion	Related readings
Week 1	No M W classes	
Week 2 Sept 8	Overview of semester Scientific writing in the field of nutrition – submit writing sample	Documents posted in Canvas
Week 3 Sept 13 & 15	Understanding research findings <i>Abstract 1: draft due to writing partner (Sept 15)</i>	
Week 4 Sept 20 & 22	Cellular biology and nutrigenomics	Ch. 1
Week 5 Sept 27 & 29	Digestion & the GI tract <i>Abstract 1: final, revised version due to instructor (Sept 27)</i>	Ch. 2
Week 6 Oct 4 & 6	<i>Carbohydrates</i>	Ch. 3 & 4
Week 7 Oct 11 & 13	Quiz I (Oct 11) Diabetes	
Week 8 Oct 18 & 20	Lipids <i>Abstract 2: draft due to writing partner (Oct 18)</i>	Ch. 5
Week 9 Oct 25 & 27	Protein <i>Abstract 2: final, revised version due to instructor (Oct 27)</i>	Ch. 6
Week 10 Nov 1 & 3	Vitamin A & carotenoids	
Week 11 Nov 8 & 10	Iron <i>Blog post: draft due to writing partner (Nov 8)</i>	
Week 12 Nov 15 & 17	Quiz II (Nov 15) Fluid balance & HTN	Ch. 10 & 11
Week 13 Nov 22	Catch up on content <i>Blog post: final, revised version due to instructor (Nov 22)</i> Thanksgiving!!!	
Week 14 Nov 29 & Dec 1	Bone: calcium, magnesium, vitamins K & D	Ch. 11 & 12
Week 15 Dec 6 & 8	B vitamins: inter-relationship and interdependence	Ch. 9
Week 16 Dec 15	Final quiz III CPS 229 10:15AM - 12:15PM	

* *The instructor reserves the right to alter the course schedule and assignments as needed.*