

HUN4221
Nutrition & Metabolism
Spring 2025 – Section 2C06

Instructor: Juan E. Andrade Laborde, Ph.D. (aka, Dr.A.)
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E-mail: jandrade2@ufl.edu (best method of contact)

Office hours: Friday 2-3 PM

**Class location
and meeting
times:**

MWF, Period 5 (11:45 AM – 12:35 PM) | [MCCA 1142](#)

Attendance:

Required; synchronous; in class is primary delivery. Zoom might take place under extenuating circumstances approved in advance by Dr. Andrade.

Credits:

3 credit hours

E-mailing

- All correspondence should be via E-mail.
- When you send an email to your instructor, you should start the subject line using **HUN4221- [your subject]**.
- Please be brief and avoid attachments unless you are sure your recipients can open them.
- Sign your message with your name and return e-mail address.
- Be sure you REALLY want everyone to receive your response when you click, "Reply All."
- Be sure that the message author intended for the information to be passed along before you click the "FORWARD" button.

**Course
Etiquette:**

- Attendance and an active/non-disruptive participation is expected
- Cellular phones should be turned to silent or off when entering the classroom. No texting during class. Students will be asked to leave the classroom, if caught texting.
- Computers are allowed during class for the sole purpose of taking notes. Both noisy typing skills and keyboards are not welcome in class. All other electronic devices should be turned off.
- Class sessions begin at the time specified. If you come in late, please take your seat quietly. Most class sessions will run the full time. Please, do not disrupt the class by arriving late or leaving early.
- Talking in class is disruptive. Please be respectful of the instructors and your fellow classmates and refrain from side conversations during class.

I. COURSE DESCRIPTION, OBJECTIVES, AND STUDENT ASSESSMENT

Course Description and Prerequisites: The course focuses on the metabolism, requirements, deficiencies, and excesses of nutrients. The course will go over macronutrients, but with a greater emphasis on vitamins and minerals. Nutrient utilization will be traced from the food source to digestion and absorption, transport, storage, and excretion. Each metabolic pathway dependent on specific nutrients will be evaluated with an emphasis on how the vitamin or mineral facilitates specific biochemical functions. The basis of how nutrient deficiencies and excesses result in metabolic abnormalities with functional and potentially toxic consequences will be detailed. Amounts required in the diet to maintain normal metabolic pathways will be discussed. Concepts related to reducing the risk of chronic diseases and birth defects will be highlighted.

Prerequisites: (BCH 3025 or BCH 4024) and (PCB 4723C or APK 2105C) and (HUN 3403 and HUN 4445).

Course Learning Objectives: By the end of this course, students will be able to

1. Specify the roles of each nutrient and their respective metabolic pathways.
2. Explain the mechanisms of digestion and absorption for each nutrient.
3. Interpret deficiency and toxicity symptoms associated with each nutrient.
4. Critique current information on diets from the perspective of nutrient metabolism.
5. Formulate evidence-based rationales for potential solutions to questions in nutrition.

This course uses the e-Learning (Canvas) system for postings of various class materials, as well as scores for exams and other assignments. Access to e-Learning requires a Gatorlink account. To establish a Gatorlink account, go to <http://www.gatorlink.ufl.edu/>. Once you have created an account, access the e-learning homepage at <http://elearning.ufl.edu/>. Continue with e-Learning Login using your Gatorlink ID.

Lecture Notes and Exams

Class lecture notes will be posted on Canvas by 7:00 PM the day before the lecture is to be presented so students can download the lectures and have them available for class. Exams will be given during class time.

Required Textbook: None. There will be supplemental resources (e.g., videos, diagrams, posters, and articles) posted on Canvas.

Class Attendance and Demeanor: Students are expected to attend all classes, to arrive on time and to leave when dismissed by the instructor. Students are expected to show courtesy to their classmates and instructor by turning cell phone ringers off before the class period begins and refraining from engaging in conversations during class unless directed to do so by the instructor. For questions regarding attendance policies, please see UF Attendance Policy: <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

Student assessment: Students' learning in this course will be evaluated based on their performance in 4 exams, 10 take home assessments, and 5 assignments.

1. Take-home assessments. Take-homes will be available for students to keep up with the content. These assessments will be open book and will cover material discussed in a previous class and ahead of class. The time to complete the take-homes will vary. Take-homes will query students with 5 to 10 questions from material covered in class and from the primary literature. There will be a total of 10 take homes worth 10 points each, for 100 points. You are expected to take these short assessments on your own. Your grade in your take-homes is final. There will be no extensions or make up take-homes. A missed take-home assessment will result in a grade of "0" unless there are unavoidable extenuating circumstances or you have an interview at a professional school, which also will require documentation. An excused, documented limitation to complete your take-home assessment will be discussed in a case-by-case manner with the instructor.

2. Assignments. There will be 3 assignments during the semester. Assignments are open book. You can work with your peers on these assignments. These are meant to complement, expand, and strengthen your knowledge in this field. Each assignment will be 20 points, for a total of 60 points.

3. Exams. There will be 4 partial exams. There will be no final. The content covered in each exam will depend on what was covered in lectures. Each exam will be worth 100 points. Exams will be issued in class and must be taken when scheduled. Absence from an exam will result in a grade of "0" unless there are unavoidable extenuating circumstances (subject to the instructor's discretion) that can be documented to satisfaction. Extenuating circumstances include unavoidable, unplanned situations such as illness (chart note from physician or clinic; vague notes such as "was seen" are not acceptable); family death (dated obituary); accident (police report); etc. **Make up exams will be given only in VERY FEW CASES.** If the instructor cannot schedule a make up exam, documented absence from an exam will result in the grade for the missed exam being calculated as the average of the other exams (all exams).

4. Extra credit points. Such opportunities may be given on unscheduled dates to check attendance or for students to participate in local events (invited seminars, etc.). Extra credit points will be added to the total points at the end of the semester. **There will be NO make-up bonus points even if the absence is excused.**

Grading: Your final grade will be computed from your performance on the following activities (out of 560 pts):

Performance Indicators	Points	Contribution
EXAM 1	100	
EXAM 2	100	
EXAM 3	100	66.6%
EXAM 4	100	
10 take home assessments x10 points	100	16.7%
3 Assignments x 20 points	60	16.7%
Total	560	100%

Grade conversion: You will receive a letter grade for this course, and pluses (+) and minuses (–) will be part of the grade. There will not be any extra points in this class. If your grade is 89.5 this will be rounded to 90. If it is 89.4, it will be rounded to 89 (no exemptions).

Grade Letter and Number Scale:

Percent	Points	Grade	Percent	Points	Grade
92.5 – 100.0	518.0 - 560	A	72.5 – 76.4	406.0 - 427.84	C
89.5 – 92.4	501.2 - 517.44	A-	69.5 - 72.4	389.2 - 405.44	C-
86.5 – 89.4	484.4 - 500.64	B+	66.5 - 69.4	372.4 - 388.64	D+
82.5 – 86.4	462.0 - 483.84	B	62.5 - 66.4	350.0 - 371.84	D
79.5 – 82.4	445.2 - 461.44	B-	59.5 - 62.4	333.2 - 349.44	D-
76.5 – 79.4	428.4 - 444.64	C+	<59.4	<332.64	F

More information on UF grading policy may be found at: [UF Graduate Catalog](#) ; [Grades and Grading Policies](#)
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II. COURSE POLICIES

Absences and Make-Up Work

Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at: <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>.

Late Policy

Students are expected to submit all take-home assessments and assignments on time. These will be collected via Canvas or in class. Assignments not turned on or before the deadline will be subject to a "late" penalty corresponding to a 10% deduction of the maximum number of points of the assignment for every day it is late.

Email

Throughout the semester, your instructor may communicate important information to the class members via e-mail. Importantly, the e-mail address on file with UF (@ufl.edu) will be used for all communications. Forward any other e-mail accounts (Gmail, etc.) to your UF account. When in doubt, use the email system on Canvas to communicate with the instructor.

Academic Integrity

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity." You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

It is assumed that you will complete all work independently in each course task unless the instructor provides explicit permission for you to collaborate on course tasks (e.g., assignments, papers, quizzes, exams). The use of artificial intelligence (AI, e.g., ChatGPT) to complete quizzes and reports is not allowed. AI-generated writing will be evaluated using online tools such as (GPTZero, GPT-2 Detector, or AI content detector | GPT-3 | ChatGPT – Writer). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code>.

Recording in class

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A "class lecture" is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private

conversations between students in the class or between a student and the faculty or lecturer during a class session. Publication without permission of the instructor is prohibited.

To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third-party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

Online Course Evaluation Process

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at: <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluer.com/ufl/>. Summaries of course evaluation results are available to students at: <https://gatorevals.aa.ufl.edu/public-results/>.

Software Use

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Services for Students with Disabilities

The [Disability Resource Center](#) coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation:

Contact DRC: 0001 Reid Hall, 352-392-8565

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see the [Notification to Students of FERPA Rights](#).

Campus Helping Resources

UF is dedicated to supporting students in their academic success and overall well-being. Life can get difficult at times, especially while in college. Many students are faced with stressors and challenges that begin to impact their success as a student. These stressors have many shapes and forms (e.g., financial, family issues, etc.) and arrive at different stages of our lives. [The U Matter. We Care Initiative](#) aims at assisting the community with: i) care-related resources and programs focused on health, safety, and holistic well-being; ii) finding an appropriate network of support education and training; iii) access to tools for helping faculty staff and family members help students; and

iv) several pathways to get involved with the initiative. Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize any of the many University's counseling resources.

- The Writing Studio. The writing studio is committed to helping University of Florida students meet their academic and professional goals by becoming better writers. Visit the writing studio online at <http://writing.ufl.edu/writing-studio/> or in 2215 Turlington Hall for one-on-one consultations and workshops.
- Counseling and Wellness Center. The [Counseling & Wellness Center](#) provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.
- Career Connection Center. The [Career Connection Center](#) educates and creates connections for the University of Florida community in order to facilitate the holistic career development of students. First Floor JWRU, 392-1601
- The Office of Victim Services. A victim advocate is available 24 hours, 7 days a week through the [University of Florida Police Department's](#) Dispatch Center at 352-392-1111. Victims may also contact an advocate directly during weekdays (Monday-Friday) between 8:00 a.m. and 5:00 p.m. by calling 352-392-5648. You can also write or e-mail the department's advocates at ovs@mail.ufl.edu. All services are free and confidential.
- **University Police Department.** For emergencies ALWAYS dial 9-1-1. For non-emergencies dial 352-392-1111. For more information, visit: <https://police.ufl.edu/>
- **E-learning technical support** 352-392-4357 (select option 2) or email to Learning-support@ufl.edu. For more information, visit: <https://elearning.ufl.edu/>
- **Library Support:** Ask the librarian for support at <https://cms.uflib.ufl.edu/ask>

Student Complaints

UF believes strongly in the ability of students to express concerns regarding their experiences at the University. The University encourages its students who wish to file a written complaint to submit that complaint directly to the department that manages that policy. A student who is unsure as to the official responsible for handling his or her particular complaint may contact the [Office of the Ombuds](#) or the [Dean of Students Office](#).

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III. Tentative Class Schedule

Week of	Monday	Wednesday	Friday	Take home*
January 13	B1	B1/B2	B3	1
January 20	<i>MLK Day</i>	B3/B5	B6	2
January 27	B7	B9	B9/B12	3
February 3	B12	Ascorbate	Exam 1	4
February 10	Ascorbate/Vitamin A	Vitamin A	Vitamin E	5
February 17	Vitamin K	Vitamin D	Vitamin D/ Calcium	6
February 24	Ca	Ca	P/K	7
March 3	P/K	Carbs	Exam 2	8
March 10	Carbs	Carbs	Proteins	9
March 17	Spring break			
March 24	Proteins	Proteins	Lipids	10
March 31	Lipids	Lipids	Exam 3	
April 7	Electrolytes	Electrolytes	Fe	
April 14	Fe	Zn	Zn/I	
April 21	I	Exam 4	No class	
May 5	Finals week			
	*Take-home assessments are due on Mondays, 8 AM.			

Assignment Due Dates/times

Assignment	Description	Date
1	Know your syllabus	01/17 by 11:30 PM
2	HUN 4221 Crossword	01/21 by 8:00 AM
3	Biochemical pathways	02/05 by 11:30 PM