

NUTRITION AND METABOLISM (HUN 4221)
SYLLABUS AND CLASS SCHEDULE
FALL SEMESTER 2021

Days: Tue/Wed/Thurs
Credits Hours: 3

Time: 11:45 a.m.-12:35 p.m.
Attendance: Highly Recommended

Location: WEIM 1084

INSTRUCTOR: James F. Collins, Ph.D.; Professor, Food Science & Human Nutrition Department
Office: FSHN Bldg., Room 441A **Phone:** 294-3749 **E-mail:** jfcollins@ufl.edu
Office Hours: Tue/Wed, 1:00-2:00 p.m., or by prior arrangement

This course will utilize the Canvas system for postings of various class materials, as well as scores for exams and other assignments. Access to e-Learning requires a Gator Link account. To establish a Gator Link account, go to <https://login.ufl.edu/> and click on the 'Create Account' button on the top of the page. Once you have created an account, access the e-Learning homepage at <http://elearning.ufl.edu/>. Continue with e-Learning login using your Gator Link username and password.

DESCRIPTION: This course focuses on nutrient metabolism, requirements, deficiencies and potential toxicities. Essential macro- and micronutrients will be covered including carbohydrates, proteins, lipids, and vitamins and minerals. Nutrient utilization will be traced from dietary sources to digestion and absorption, transport, storage, and excretion. Metabolic pathways dependent on individual nutrients will be evaluated with an emphasis on specific biochemical functions. The basis of how nutrient deficiencies and excesses result in metabolic perturbations with functional and potentially toxic consequences will be detailed. Amounts required in the diet to maintain normal metabolism will also be considered. Concepts related to reducing the risk for chronic diseases and birth defects will be highlighted. The validity of health claims for key nutrient supplements will be critiqued by evaluating the metabolic basis for these claims and current research supporting or refuting them.

Prerequisites: BCH 3025 or BCH 4024; APK2105C or PCB 4723C

Learning Objectives:

1. Summarize dietary requirements for the essential nutrients in humans
2. Explain mechanisms of digestion, absorption, distribution and utilization for the essential nutrients
3. Compare the specific physiologic and pathophysiologic role(s) of each nutrient
4. Describe the biochemical role(s) of the essential nutrients in various metabolic pathways
5. Discuss deficiency and toxicity symptoms associated with each nutrient, and groups at risk
6. List the population subgroups that could benefit from consumption of various dietary supplements

TEACHING ASSISTANT: Pearl Ebea, M.S.; **Email-** pearl.ebea@ufl.edu; **Office Hours:** Mondays from 1:00-2:00 p.m. and Fridays from 11:00 a.m. to 12:00 p.m., or by appointment only at other times. **Location:** FSHN bldg., room 433A. Office hours can also be arranged via zoom, using the following link- <https://ufl.zoom.us/j/8895930322>

Required Readings: Various materials supporting the lectures will be posted on e-Learning.

Lecture Slides: Power Point files will be posted on Canvas by 7:00 PM the day before a given lecture so students can review the slides prior to class.

Student Evaluation: Four exams and ten quizzes will be used to evaluate student performance. Questions will be based upon information covered in class and in the required readings. Exams will be worth 70-100 points, depending upon how many lectures are covered on each exam. Exams must be taken when scheduled. Absence from an exam will result in a grade of "0" unless there are unavoidable extenuating circumstances (subject to our discretion) that can be documented to our 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 may be arranged at the discretion of the instructor.

Ten, 10-point quizzes will be given- the lowest quiz score will be dropped. A missed quiz will result in a grade of "0" unless there are unavoidable, extenuating circumstances (as outlined above), or if you have an interview at a professional school, which will also require documentation. Make up quizzes may be arranged at the discretion of the instructor.

Performance Indicators

4 EXAMS (PT TOTAL VARIES)
9 QUIZZES (10 PTS EACH)

Points

360 PTS (EX 1 = 100 PTS; EX 2 = 70 PTS; EX 3 = 100 PTS; EX 4 = 90 PTS)
90 PTS

450 TOTAL PTS

Final grades will be assigned according to total points earned:

A = 450-414 A- = 413-405 B+ = 404-396 B = 395-369 B- = 368-360 C+ = 359-351
C = 350-324 C- = 323-315 D+ = 314-306 D = 305-279 D- = 278-270 E = ≤270

Grades are not curved and are not negotiable. Should you have concerns or questions about your performance in the class, please see your instructor or teaching assistant as soon as possible. ***Do not wait until the end of the semester!*** You will have until a subsequent exam to discuss issues related to a previous exam with the instructor or the class TA. Another words, for example, you must see us to discuss exam 1 prior to exam 2 being administered. The same applies for quizzes. NOTE: No extra credit projects will be available. Current UF grading policies are found here: <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

Periodic bonus points may be available on unscheduled dates. Bonus points will be added to total points at the end of the semester. ***There will be NO make-up bonus points even if an absence is excused.***

EXPECTATIONS: Regular attendance is expected and encouraged. In our experience, students who attend class regularly and actively participate in class-related exercises, typically earn higher grades at the end of the semester. You are responsible for all material presented in class, and for any assignments made for out-of-class work, including required readings posted on e-Learning. Course requirements for class attendance and make-ups, etc., are consistent with UF policies: <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>.

CLASSROOM POLICIES: Our class sessions will be in person and will also be recorded for some students in the class to either watch live or later. Students who watch lectures live remotely with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you do not consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. Unauthorized recording and unauthorized sharing of recorded materials is prohibited.

In response to COVID-19, the following practices are in place to maintain your learning environment, to enhance the safety of our in-classroom interactions, and to further the health and safety of us, our neighbors, and our loved ones.

- If you are not vaccinated, get vaccinated. Vaccines are readily available at no cost and have been demonstrated to be safe and effective against the COVID-19 virus. Visit this link for details on where to get your shot, including options that do not require an appointment: <https://coronavirus.uflhealth.org/vaccinations/vaccine-availability/>. Students who receive the first dose of the vaccine somewhere off-campus and/or outside of Gainesville can still receive their second dose on campus.
- You are expected to always wear approved face coverings during class and within buildings even if you are vaccinated. Please continue to follow healthy habits, including best practices like frequent hand washing. Following these practices is our responsibility as Gators.
 - Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class.

- Hand sanitizing stations are located in every classroom.
- If you sick, stay home and self-quarantine. Please visit the UF Health Screen, Test & Protect website about next steps, retake the questionnaire and schedule your test for no sooner than 24 hours after your symptoms began. Please call your primary care provider if you are ill and need immediate care or the UF Student Health Care Center at 352-392-1161 (or email covid@shcc.ufl.edu) to be evaluated for testing and to receive further instructions about returning to campus. UF Health Screen, Test & Protect offers guidance when you are sick, have been exposed to someone who has tested positive or have tested positive yourself. Visit the [UF Health Screen, Test & Protect website](#) for more information.
 - Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work.
 - If you are withheld from campus by the Department of Health through Screen, Test & Protect you are not permitted to use any on campus facilities. Students attempting to attend campus activities when withheld from campus will be referred to the Dean of Students Office.
- Continue to regularly visit coronavirus.UFHealth.org and coronavirus.ufl.edu for up-to-date information about COVID-19 and vaccination.

COVID Contingencies: Given the current state of the pandemic and anticipating that some students may be unable to attend class in person due to viral exposure and/or quarantine, the following remote options will be available this semester:

1) Office hours may be arranged with Dr. Collins in advance by zoom. The zoom link is- <https://ufl.zoom.us/j/9793781413?pwd=R2FibGcrbVVMN0ZrMjU3SUNNUnpVdz09>; Meeting ID: 979 378 1413; Passcode: 257620. Details about using UF Zoom can be found here: <https://elearning.ufl.edu/zoom/>

2) Lectures will be recorded live (i.e., synchronous) on Zoom. Links to the recordings will be posted on Canvas. Link to live lectures- <https://ufl.zoom.us/j/97507251290?pwd=Z3NtbEU4MFEzQ0JRQWVxMEJ5cVNtZz09>; Meeting ID: 975 0725 1290; Passcode: 460495

3) Quizzes and exams may be taken (synchronously) via HonorLock (details below). This option is only available with prior approval from Dr. Collins. Should you not be cleared for campus for COVID-related reasons, please contact Dr. Collins or your teaching assistant (Pearl Ebea) to discuss options at your earliest convenience.

Honorlock is an online proctoring service that allows you to take exams or quizzes remotely. You DO NOT need to create an account, download software or schedule an appointment in advance. Honorlock is available 24/7, and all that is needed is a computer, a working webcam/microphone, your ID, and a stable internet connection. To get started, you will need Google Chrome and download the [Honorlock Chrome Extension](#). When you are ready to complete your assessment, log into Canvas, go to your course, and click on your exam. Clicking "Launch Proctoring" will begin the Honorlock authentication process, where you will take a picture of yourself, show your ID, and complete a scan of your room. Honorlock will be recording your exam session through your webcam, microphone, and recording your screen. Honorlock also has an integrity algorithm that can detect search-engine use, so please do not attempt to search for answers, even if it's on a secondary device. Honorlock support is available 24/7/365. If you encounter any issues, you may contact them through live chat on the [support page](#) or within the exam itself. Some guides you should review are [Honorlock MSRs](#), [Student FAQ](#), [Honorlock Knowledge Base](#), and [How to Use Honorlock](#). We wish you success!

Academic Honesty: UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students 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." The Conduct Code specifies a number of behaviors that are in violation of this code and the possible sanctions. If you have any questions or concerns, please consult with the instructor or TAs in this class. For more information regarding the Student Honor Code, please see: <https://www.dso.ufl.edu/sccr/process/student-conduct-honor-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.bluera.com/ufl/>. Summaries of course evaluation results are available to students at: <https://gatorevals.aa.ufl.edu/public-results/>.

Campus Resources:

Health and Wellness

- U Matter, We Care: If you or someone you know is in distress, please contact umatter@ufl.edu, 352-392-1575, or visit U Matter, We Care website (<https://umatter.ufl.edu/>) to refer or report a concern and a team member will reach out to the student in distress.
- Counseling and Wellness Center: Visit the Counseling and Wellness Center website (<https://counseling.ufl.edu/>) or call 352-392-1575 for information on crisis services as well as non-crisis services.
- Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need or visit the Student Health Care Center website (<https://shcc.ufl.edu/>).
- University Police Department: Visit UF Police Department website (<https://police.ufl.edu/>) or call 352-392-1111 (or 9-1-1 for emergencies).
- UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit the UF Health Emergency Room and Trauma Center website (<https://ufhealth.org/emergency-room-trauma-center>).
- GatorWell Health Promotion Services: For prevention services focused on optimal wellbeing, including Wellness Coaching for Academic Success, visit the GatorWell website (<https://gatorwell.ufsa.ufl.edu/>) or call 352-273-4450.

Academic Resources

- E-learning technical support: Contact the UF Computing Help Desk (<https://helpdesk.ufl.edu/>) at 352-392-4357 or via e-mail at helpdesk@ufl.edu.
- Career Connections Center (<https://career.ufl.edu/>): Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.
- Library Support (<https://uflib.ufl.edu/find/ask/>): Various ways to receive assistance with respect to using the libraries or finding resources.
- Teaching Center (<https://teachingcenter.ufl.edu/>): Broward Hall, 352-392-2010 or to make an appointment 352-392-6420. General study skills and tutoring.
- Writing Studio (<https://writing.ufl.edu/writing-studio/>): 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.
- Student Complaints On-Campus: Visit the Student Honor Code and Student Conduct Code webpage for more information.
- On-Line Students Complaints: View the Distance Learning Student Complaint Process

Services for Students with Disabilities (0001 Reid Hall, 352-392-8565, <https://disability.ufl.edu/>)

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.

Software Use: All faculty, staff and students at 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.

Other Information: Lecture materials and other information are the property of the University of Florida and the course Instructor and may not be used for any commercial purpose. Students found in violation may be subject to disciplinary action under the University's Student Conduct Code. Only students formally registered for the course are permitted to attend lectures and take exams.

In-class Recordings: 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

CLASS SCHEDULE#

AUGUST	24	T†	Course Intro		
WATER-SOLUBLE VITAMINS	25	W	Folate		
	26	R	Folate		
	31	T	Vitamin B ₁₂	Practice Quiz	
SEPTEMBER	1	W	Vitamin B ₁₂		
	2	R**	Vitamin B ₆	Q1 (Folate, B ₁₂)	
	7	T	Thiamin (B ₁)		
	8	W	Riboflavin (B ₂)		
	9	R**	Niacin (B ₃)	Q2 (B ₆ , B ₁ , B ₂)	
	14	T	Biotin		
	15	W	Vitamin C		
	16	R**	Exam Review	Q3 (B ₃ , biotin, vitamin C)	
	21	T	EXAM 1 (COVERS 10 LECTURES = 100 POINTS [40Q])		
FAT-SOLUBLE VITAMINS	22	W	Vitamin E		
	23	R	Vitamin D		
	28	T	Vitamin D		
	29	W**	Vitamin A	Q4 (vitamin E, vitamin D)	
	30	R	Vitamin A		
OCTOBER	5	T	Vitamin K		
	6	W**	Metabolic Integration (Vitamins)	Q5 (vitamins A, K)	
	7	R	Exam Review		
	12	T	EXAM 2 (COVERS 7 lectures = 70 points [28Q])		
		13	W	Calcium	
MINERALS	14	R	Phosphorus/Magnesium		
	19	T	Copper		
	20	W**	Iron	Q6 (Ca, P, Mg, Cu)	
	21	R	Iron		
	26	T	Zinc		
	27	W**	Selenium	Q7 (Fe, Zn, Se)	
	28	R	Iodine		
NOVEMBER	2	T	Electrolytes (Na, K, Cl)		
	3	W	Antioxidants		
	4	R**	Exam Review	Q8 (I, electrolytes, antioxidants)	
	9	T	EXAM 3 (COVERS 10 LECTURES = 100 POINTS [40Q])		
		10	W	Carbohydrates	
MACRONUTRIENTS	11	R	No Class- Veterans Day		
	16	T	Carbohydrates		
	17	W	Lipids		
	18	R	Lipids		
	23	T	OPEN (TBD)		
	24	W	No Class- Thanksgiving break		
	25	R	No Class- Thanksgiving break		
	30	T**	Proteins	Q9 (CHOs, lipids)	
	DECEMBER	1	W	Proteins	
		2	R	Metabolic Integration (Minerals/Macronutrients)	
7		T**	Exam Review	Q10 (proteins, MI)	
	8	W	EXAM 4 (COVERS 7 LECTURES [28Q] + COMPREHENSIVE [8Q] = [36Q] = 90 POINTS)		

#Subject to change

†T = Tuesday; W = Wednesday; R = Thursday

**Quizzes given on these days

Student Information Sheet*



Please copy and paste a picture of yourself into this box.

Name:

Major:

Hometown:

Hobbies/Interests:

One interesting/unique thing about you:

Grade you expect to get in this course (circle one): A B C D E

Career Goals:

How will this class help you achieve these goals?

I understand everything on the syllabus, and further, if anything is confusing to me, I will ask the instructor or TA for clarification. Signed: _____ Date: _____

*Two bonus points may be earned if you turn this in to Dr. Collins' prior to Exam 1 (email is preferable).