

NUTRITION AND METABOLISM (HUN 4221)
SYLLABUS AND CLASS SCHEDULE
FALL SEMESTER 2020

Days: Tue/Wed/Thurs **Time:** 11:45 a.m.-12:35 p.m. **Modality:** Synchronous online (via Zoom)
Credits Hours: 3 **Live Attendance:** Highly Recommended

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
Remote Office Hours: Tue/Wed, 1:00-2:00 p.m., or by prior arrangement

Zoom Info: Details about using UF Zoom can be found here: <https://elearning.ufl.edu/zoom/>

Lectures: <https://ufl.zoom.us/j/98287237945>; Meeting ID: 982 8723 7945

Dr. Collins Office Hours: <https://ufl.zoom.us/j/98255132138?pwd=QjdCelhPWHA1VEFQNzc1emdZL1I2dz09>;
Meeting ID: 982 5513 2138

Ms. Lee's Office Hours:

Mondays- <https://ufl.zoom.us/j/92500277808?pwd=Snc5MEJJS2oreC9yKzMzSWU5SIVMdz09>; Meeting ID:
925 0027 7808

Thursdays- <https://ufl.zoom.us/j/99614903604?pwd=N1kxU21ieTFtbGR4RFo2UjVLMU5zZz09>; Meeting ID: 996
1490 3604

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: Jennifer Lee, **Remote Office Hours:** Mondays from 10:00-11:30 a.m. and Thursdays from 1:00-2:30 p.m. or by appointment. **E-mail:** leejennifer@ufl.edu

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.

Quizzes and exams will be administered by Honorlock, which is an online proctoring service that allows you to take your exam from the comfort of your home. 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!

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 60-100 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.

<u>Performance Indicators</u>	<u>Points</u>
EXAMS	340 (100, 60, 90, 90)
QUIZZES (10 PTS EACH)	90
TOTAL	<u>430</u>

Final grades will be assigned according to total points earned:

A = 430-396	A- = 395-387	B+ = 386-378	B = 377-353	B- = 352-344	C+ = 343-336
C = 335-310	C- = 309-301	D+ = 300-293	D = 292-267	D- = 266-258	E = ≤258

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 audio or visually recorded for students in the class to refer back to. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to 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. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

Academic Honesty: 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 unless the Instructor provides explicit permission for you to collaborate on course tasks (e.g., assignments, papers, quizzes, exams). 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: <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 Helping Resources: Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. 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.

University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu
Counseling Services, Groups and Workshops, Outreach and Consultation, Self-Help Library
Training Programs, Community Provider Database

U Matter We Care, www.umatter.ufl.edu

Career Connections Center, First Floor JWRU, 392-1601, <https://career.ufl.edu/>

Student Success Initiative, <http://studentsuccess.ufl.edu>.

Student Complaints:

- Residential Course: <https://sccr.dso.ufl.edu/policies/student-honor-code-studentconduct-code/>.
- Online Course: <http://www.distance.ufl.edu/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 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.

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.

CLASS SCHEDULE#

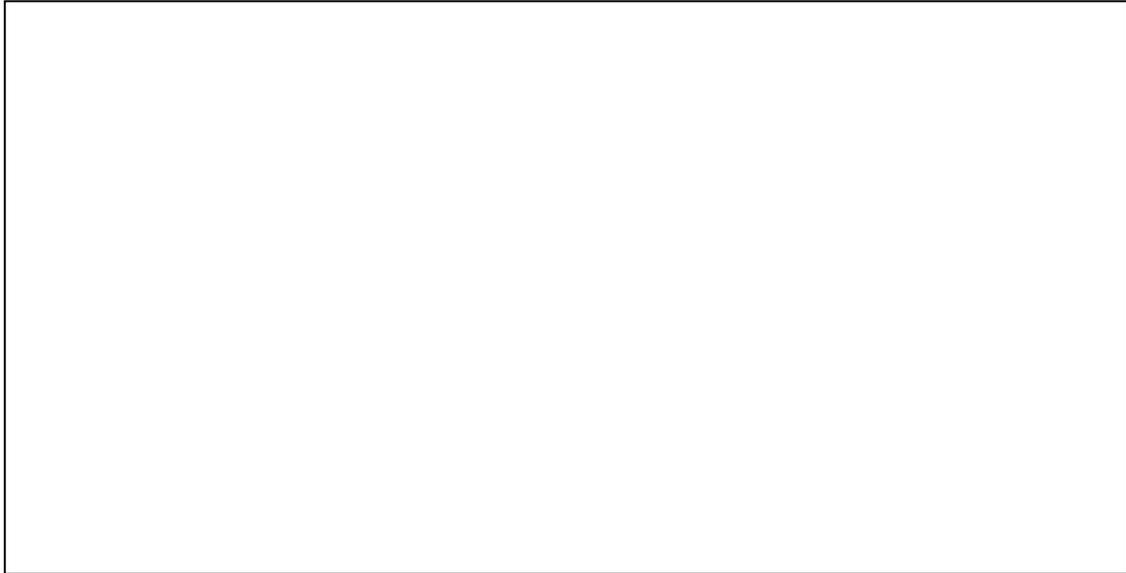
WATER-SOLUBLE VITAMINS	SEPTEMBER	1	T†	Course Intro	
		2	W	Folate	
		3	R	Folate	
		8	T	Vitamin B ₁₂	Practice Quiz
		9	W	Vitamin B ₁₂	
		10	R**	Vitamin B ₆	Q1 (Folate, B ₁₂)
		15	T	Thiamin (B ₁)	
		16	W	Riboflavin (B ₂)	
		17	R**	Niacin (B ₃)	Q2 (B ₆ , B ₁ , B ₂)
		22	T	Biotin	
	23	W	Vitamin C		
	24	R**	Exam Review	Q3 (B ₃ , biotin, vitamin C)	
	29	T	EXAM 1 (COVERS 10 LECTURES = 100 POINTS [40Q])		
FAT-SOLUBLE VITAMINS		30	W	Vitamin E	
	OCTOBER	1	R	Vitamin D	
		6	T	Vitamin D	
		7	W**	Vitamin A	Q4 (vitamin E, vitamin D)
		8	R	Vitamin A	
		13	T	Vitamin K	
		14	W**	Exam Review	Q5 (vitamins A, K)
	15	R	EXAM 2 (COVERS 6 lectures = 60 points [24Q])		
MINERALS		20	T	Calcium	
		21	W	Phosphorus / Magnesium	
		22	R	Copper	
		27	T**	Iron	Q6 (Ca, P, Mg, Cu)
		28	W	Iron	
		29	R	Zinc	
	NOVEMBER	3	T**	Selenium / Iodine	Q7 (Fe, Zn)
		4	W	Electrolytes (Na, K, Cl)	
		5	R	Antioxidants	
	10	T**	Exam Review	Q8 (Se, I, electrolytes, antioxidants)	
	11	W	No Class- Veterans Day		
	12	R	EXAM 3 (COVERS 9 LECTURES = 90 POINTS [36Q])		
MACRONUTRIENTS		17	T	Carbohydrates	
		18	W	Carbohydrates	
		19	R	Lipids	
		24	T	Lipids	
		25	W	No Class- Thanksgiving break	
		26	R	No Class- Thanksgiving break	
	DECEMBER 12	1	T**	Proteins	Q9 (CHOs, lipids)
	2	W	Proteins		
	3	R	Metabolic Integration		
	8	T**	Exam Review	Q10 (proteins, metabolic integration)	
	9	W	EXAM 4 (COVERS 7 LECTURES [28Q] + COMPREHENSIVE [8Q] = 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).**