

Special Topics: Feeding the Microbiota (HUN4936-3F69)
(3 credits)
Spring 2021

Course Instructor

Wendy J. Dahl, PhD RD

Food Science and Human Nutrition Department

Class Time: Monday 3:00 - 4:55 p.m. synchronous through Zoom + 1 hour online/asynchronous

Office Hours: Tuesday 3:00 - 5:00 p.m. or by appointment (through Zoom)

Laboratory: Four sessions with flexible dates and a virtual/remote option

FSHN Building, Room 207

Email: wdahl@ufl.edu

Course Description

An exploration of non-digestible food components, gut microbiota composition, metabolism and human health.

Prerequisites: BCH4024 or BCH3025 and a principles of nutrition course.

Course Objectives

Through active participation, the student will:

1. Describe the molecular techniques used to assess the composition of gastrointestinal and fecal microbiota.
2. Contrast the general composition of the human microbiota in health and disease.
3. Differentiate between nutrients and non-digestible food components.
4. Contrast carbohydrate and protein microbial fermentation
5. Analyze the evidence related to a microbially-generated metabolite on human health.
6. Interpret a microbiota profile.
7. Evaluate the relationship between diet and microbiota profile.
8. Contribute to the body of scientific knowledge.

Learning Principles

1. Learning requires structure and guidance.
2. Learning is enhanced through facilitation.
3. Learning may require relearning.
4. Learning needs differ among individuals.
5. Learning requires discourse.
6. Learning is enhanced through critical thought.
7. Learning is enhanced by curiosity and engagement.
8. Learning is enhanced through problem solving.
9. Learning influences future decisions.
10. Learning is lifelong.

Required Resource Materials

There is no assigned textbook for this course. Readings and resources will be provided on e-Learning in Canvas:

<http://elearning.ufl.edu>.

Expectations for Classroom Discussions and Attendance

Students are expected to virtually attend all class sessions, join on time and be present for the entire class. If you are unable to attend, please notify the instructor about your situation as soon as possible, leaving a message if necessary (by text message, e-mail or voice mail). Students are expected to show courtesy to their classmates, instructors and guest speakers.

Course Activities

1. Research Article Presentation: With the assistance of the instructor, identify a peer-reviewed research paper that will help you answer one of the assigned questions on microbiota and disease. During class, you will be asked to present a PowerPoint presentation on the research hypothesis, study design, results, limitations, and conclusions of the research article, as well as answer your assigned question based on the paper's findings.
2. 25-word summaries: Very brief summaries of assigned readings and research papers.
3. Hot Topics: An opportunity to share nutrition and microbiota topics that you have seen on social media etc.
4. Metabolite Paper and Presentation: Choose one metabolite that is produced by the gut microbiota. Present on its structure, synthesis, absorption, blood levels, and its links to health or disease.
5. Diet Quality and Microbiota Connections: Lab activities (with virtual options) and a group summary of findings.
6. Review Quizzes and Final Examination

Student Evaluation

Distribution of points (Assignments will be posted on Canvas):

Research Article Presentation	25 points
25-word summaries (5@10 points)	50 points
Hot topics and Questions (5@5 points)	25 points
Review Quizzes (2@25 points)	50 points
Lab Activities: Diet Quality and Microbiota Connections	
Lab/virtual participation	10 points
Lab Reports (4@10 points)	40 points
Group Summary	25 points
Metabolite paper	75 points
Metabolite presentation	25 points
Final Examination	75 points
Total	400 points

Grading Scale

Points	Percentages	Grade	Points	Percentages	Grade
372-400	93-100%	A	292-307	73-76%	C
360-371	90-92%	A-	280-291	70-72%	C-
348-359	87-89%	B+	268-279	67-69%	D+
332-347	83-86%	B	252-267	63-66%	D
320-331	80-82%	B-	240-251	60-62%	D-
308-319	77-79%	C+	<240	<60%	E

Grades and Grade Points

For information on current UF policies for assigning grade points, see <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>.

Attendance 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/>.

COVID Response Statements

We will have face-to-face instructional sessions to accomplish the student learning objectives of this course. In response to COVID-19, the following policies and requirements are in place to maintain your learning environment and to enhance the safety of our in-classroom interactions.

- You are required to wear approved face coverings at all times during class and within buildings. Following and enforcing these policies and requirements are all of our responsibility. Failure to do so will lead to a report to the Office of Student Conduct and Conflict Resolution.
- This course has been assigned a physical classroom with enough capacity to maintain physical distancing (6 feet between individuals) requirements. Please utilize designated seats and maintain appropriate spacing between students. Please do not move desks or stations.

- 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.
- Follow your instructor's guidance on how to enter and exit the classroom. Practice physical distancing to the extent possible when entering and exiting the classroom.
- If you are experiencing COVID-19 click here for guidance from the CDC on symptoms <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>; please use the UF Health screening system and follow the instructions on whether you are able to attend class. Click here <https://coronavirus.ufhealth.org/screen-test-protect/covid-19-exposure-and-symptoms-who-do-i-call-if/> for UF Health guidance on what to do if you have been exposed to or are experiencing Covid-19 symptoms.

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. Find more information in the university attendance policies.

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. 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.

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/>.

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: <http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code>.

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

0001 Reid Hall, 352-392-8565, <https://disability.ufl.edu/>

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 Wellness Coaching
- 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-student-conduct-code/>.
- Online Course: <http://www.distance.ufl.edu/student-complaint-process>

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ZOOM CLASS SCHEDULE* (Assignments, readings and resources posted on Canvas)

Date	Topic	Assignments Due*	Readings and Resources
January 11	Course overview and introduction “The Zoo Within Us”		<i>TBA</i>
January 18	Martin Luther King Day – No class		
January 25	Analyzing Microbiota Composition		
February 1	Microbiota and Brain Health	<i>Review Quiz 1 this week</i>	
February 8	Microbiota and Kidney Disease		
February 15	Microbiota and Disease: Student presentations	<i>Research article presentation</i>	
February 22	Diet and microbiota		
March 1	Carbohydrate fermentation	<i>25-word summary</i>	
March 8	Protein fermentation	<i>25-word summary</i>	
March 15	Food form and microbiota	<i>25-word summary</i>	
March 22	Polyphenols and microbiota	<i>25-word summary</i>	
March 29	Probiotics and microbiota	<i>25-word summary</i>	
April 5	Microbiota and industry practice	<i>Review Quiz 2 this week</i>	
April 12	Microbial-generated metabolite: TMAO	<i>Lab Group summary</i>	
April 19	Microbial-generated metabolites: Student presentations	<i>Metabolite presentation Written paper due April 21</i>	
April 28 3 – 5 pm	Final Exam		

**Lab dates TBD; lab report due 1 week following lab experience
Hot Topics can be shared or questions may be posed during any scheduled class.*