

ANS6932
Gastrointestinal Microbiology
Fall 2024

Course description: This is a three-credit course covering microorganisms and their function in the gastrointestinal tract (GIT) in animals. Through this course, students will learn advanced knowledge of gastrointestinal microbiology including GIT microbiome, host-microbe interactions, rumen function, GIT disorder and immunity, methane production and mitigation, and probiotics in animals.

Instructor: Kwang Cheol (KC) Jeong
kcjeong@ufl.edu
Tel: 352-294-5376
Office hours: By appointment

Credit: 3 credits.

Prerequisites: None

Meeting days/time: Tuesday (period 6/7), Thursday (period 6),

Location: Animal Sciences Building (2250 Shealy Dr., Bldg., 499), Room 201

Text: none required

Recommended Text:

Gastrointestinal Microbiology, Edited by Arthur C. Ouwehand and Elaine E. Vaughan, Taylor & Francis Group, 2006

Gastrointestinal Microbes and Host Interactions (vol. 2), Edited by Roderick I. Mackie, Bryan A. White, and Richard E. Isaacson, Chapman & Hall, 1997

Course format: Instructor will give lectures on Tuesdays and research articles will be discussed on Thursdays. The research article discussion will be led by students. Depending on the number of enrolled students, each student is expected to lead the paper discussion at least one time during the course.

Course website:

E-learning support services; <https://elearning.ufl.edu/>

Course objectives: Upon completion of this course, students

- Will acquire principal knowledge of gastrointestinal microbiology
- Will learn advanced gastrointestinal microbiology research
- Will obtain knowledge of cutting-edge techniques of microbial analyses
- Will be able to apply gastrointestinal microbial knowledge to their research topics

Grading:

- Grades will be based on performance on exams, a student presentation, and participation
- One midterm (40%), one final exam (40%), student presentation(s) (10%), and student participation in class (10%) will account for final grade
- Plagiarism will result in no credit awarded for the exam

- The presentation will be graded by the organization of presentation, clarity of presentation, knowledge of the subject, and handling of questions
- Participation will be graded by preparedness and participation in other students' presentations. Students are expected to read all of the assigned papers for the student presentation and will be graded by the level of understanding of the papers

Lecture content and schedule:

Week	Date	Lecture Content	Instructor/Guest speaker
1	8/22	Concepts of gastrointestinal microbiology	KC Jeong
2	8/27 & 8/29	Anatomy of GIT and microbial diversity	KC Jeong
3	9/3 & 9/5	Rumen function and microbiology	Fernanda Batistel
4	9/10 & 9/12	Energy balance in GIT and microbiology	Fernanda Batistel
5	9/17 & 9/19	Host-microbe interactions	KC Jeong
6	9/24 & 9/26	GIT Microbiome 1 - general	KC Jeong
7	10/1 & 10/3	GIT Microbiome 2 - analysis	KC Jeong
8	10/8 & 10/10	Midterm exam	KC Jeong
9	10/15 & 10/17	GIT immune system	Corwin Nelson
10	10/22 & 10/24	Methane emissions and mitigation in ruminants	Diwakar Vyas
11	10/29 & 10/31	Probiotics in livestock	Yuting Zhai
12	11/5 & 11/7	Manipulation of the microbiome	KC Jeong
13	11/12 & 11/14	GIT disorders in livestock	Nicolas DiLorenzo
14	11/19 & 11/21	Lecture Review	KC Jeong
15	11/26 & 12/8	Thanksgiving Holiday (no class)	KC Jeong
16	12/3	Final exam	KC Jeong

Student presentation:

- Papers will be selected by the instructor and will be informed to students at the beginning of the class
- PDF version of papers will be posted on the class website

Grading scale:

- A (93 and above),
- A- (90-92),
- B+ (87-89),
- B (83-86),
- B- (80-82),
- C+ (77-79),
- C (73-76),
- C- (70-72),
- D+ (67-69),
- D (63-66),
- D- (60-62),
- E (<60)

Grades and Grade Points

For information on current UF policies for assigning grade points, see <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

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/ugrad/current/regulations/info/attendance.aspx>.

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. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/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.

AI tool Use:

Please follow UF/IF guidelines for AI use.

UFpolicy: https://www.syllabus.ufl.edu/media/syllabusufledu/syllabi_policy_09_09_2022.pdf

CALS policy: https://cals.ufl.edu/content/pdf/Faculty_Staff/CALS-Syllabus-Policy.pdf

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, www.dso.ufl.edu/drc/

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/cwc/

- Counseling Services
- Groups and Workshops
- Outreach and Consultation
- Self-Help Library
- Training Programs
- Community Provider Database

Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/

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