Host-associated Microbiomes (MCB 3620)
Time: T/R 12:30pm – 1:45pm　　　　　　Location: **Online**

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　　　　Office hours: TLS409, Thursdays 2:00 - 3:00pm
　　　　https://uconn-cmr.webex.com/meet/smh15104

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　　　　Office hours: Wednesdays 3:00-4:00pm
　　　　https://uconn-cmr.webex.com/uconn-cmr/j.php?MTID=m62b7da59e6d0bcf2df1ff31a82932a71

Office hours are a time when your instructors are always in their offices and available to meet with you. Ask questions. Clarify confusion. Please use this time! We can also meet by appointment - email in advance to set up a time.

Course Description
Interest in the microbiome has grown rapidly in recent years and the ubiquity and importance of these communities is well known. The relationships between a host and its microbiome is a fundamental biological interaction that students will benefit from studying. In addition to some applied aspects of host-associated microbiomes, there are basic research questions and many possible avenues for novel research to explore.

Textbook
Fundamentals of Microbiome Science by Angela E. Douglas ($29-40). Readings will also be assigned from primary literature and will be available on HuskyCT.

Course Objectives
By the end of the course, students will be able to:
1. Read, interpret and discuss scientific literature on host-associated microbiomes
2. Understand the (known) forces shaping host-associated microbiomes
3. Understand the (known) interactions between a host and its microbiome
4. Discuss the future of microbiome research and large research questions in host-associated microbiomes

Course Schedule (Subject to Change)

	Day	Date	Topic	Due	Ch.
1	T	1/19	Ch 1: Introduction Reading: Carey et al. 2020. https://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1008032		1
2	R	1/21	How to read & present a paper Reading: Grond et al. 2020.		1

			https://royalsocietypublishing.org/doi/full/10.1098/rsos.191609		
3	T	1/26	Ch 2: The ancient roots of the animal microbiomes	**Q1**	2
4	R	1/28	**SP1**		2
5	T	2/2	**SP2**		2
6	R	2/4	**SP3**	**Q2**	2
7	T	2/9	Ch 3: The microbiome and human health		3
8	R	2/11	**SP4**		3
9	T	2/16	**SP5**		3
10	R	2/18	**SP6**	**Q3**	3
11	T	2/23	Ch 4: Defining the rules of engagement: The microbiome and the animal immune system		4
12	R	2/25	**SP7**		4
13	T	3/2	**SP8**	**PAPER1**	4
14	R	3/4	**SP9**	**Q4**	4
15	T	3/9	Ch 5: Microbial drives of animal behavior		5
16	R	3/11	**SP10**		5
17	T	3/16	**SP11**		5
18	R	3/18	**SP12**	**Q5**	5
19	T	3/23	Ch 6: The Inner ecosystem of animals & Ch. 7: Evolutionary processes and consequences		6
20	R	3/25	**SP13**		6
21	T	3/30	**SP14**	**Q6**	6
22	R	4/1	**SP15**		7
23	T	4/6	**SP16**		7
24	R	4/8	**SP17**	**Q7**	7
	T	4/13	*No class*		
	R	4/15	*No class*		
25	T	4/20	**SP18 /** Ch 8: The animal reimagined		8
26	R	4/22	**SP19**	**PAPER2**	8
27	T	4/27	**SP20**	**Q8**	8

Evaluation – Grades will not be curved and will be assigned on how many of the assigned points you have earned over the course of the semester. **NOTE: You are responsible for all of the due dates below.**

20% - Paper presentation 1 (200 points): Students will self-select dates after the first class.
25% - Paper presentation 2 (250 points):Students will self-select dates after the first class.
20% - Quizzes (8 total = 25 points / quiz; total of 200 points):
      Q1 = 26 Jan; Q2 = 4 Feb; Q3 =18 Feb; Q4 = 4 Mar; Q5 = 18 Mar; Q6 = 30 Mar;
      Q7 = 8 Apr; Q8 = 27 Apr
10% - 2-page review 1 (100 points): 2 March 2021
10% - 2-page review 2 (100 points): 22 April 2021
10% - Daily paper summaries, DUE every class before lecture in which the paper is read (100
      points total, 5 points per paper summary)
5% - Participation (50 points)

Student presentations – A large portion of the grade for this class is based on the two presentations the students give to the class. Each week, two students will present information on a single paper. "Student 1" will provide ~20 minutes of in depth background information, relevant to the information in the paper plus information on one of the methods in the paper. "Student 2" will provide ~25 minutes of in depth information on the findings and figures in the paper plus information on one of the methods in the paper. We will then have a class discussion on the paper.

Student pairs will pick the paper together and must send the choice to us *AT LEAST 10 days before the presentation*. This is important so that everyone in the class can have 7 full days to read the paper. *Point deductions will occur for missing this deadline.*

You will be graded on both *content* and presentation *effectiveness/clarity*; PowerPoint or a similar program are suggested. You must include citations to primary literature (especially relevant to Student1 presentations).

2-page review– *single spaced, 12pt font*; a summary of a paper of your choosing. Should include at least 4 additional citations **and** a figure from the paper (that you describe the interpretation and significance of). Include a general discussion of the paper, including: why is the paper important, why did the authors write the paper? How did the authors gather the data? What do the results mean? Your papers should also incorporate themes we've discussed in class. Include future directions the research could take. Papers will be submitted online to HuskyCT. Late penalty = 10% the first day; 5% every day thereafter.

Daily paper summary – *Before each class,* post to HuskyCT these three pieces of information:
● Title, Author, Journal
● 1-2 sentence summary of the paper.

- 1 question you have after finishing the paper. (e.g., Was there something you didn't understand? A method or term you're unfamiliar with? Unclear on the motivation for the research?)

These are meant to encourage you to think critically about the papers as you read them and you may be called on to read them/ask them to the class or small group. You do not have to understand everything in a paper the first time you read it to be successful in this class! Identifying questions is a critical piece of science.

Quizzes - There will be one quiz for each assigned book chapter. These will likely be online (Google Forms) with individual instructions and sent to your emails.

Participation - Participation is an essential learning tool for this class. We expect you to be actively engaged in listening to presentations and contributing to the discussion; in other words, you should expect to say words out loud.

Structure of class – Students are expected to have thoroughly read the assigned articles or chapters prior to class. During most class periods, two students will present their paper and we will have a discussion about it where *everyone should expect to contribute*. We'll also have lectures about more detailed background information (including information in the book chapters) and other research findings in microbiome research. Assignments are due prior to the beginning of class.

Academic Honesty Statement – Written and presented work will be checked for plagiarism. Identified cases of academic dishonesty will receive a zero on the assignment or test, and student will be referred to the Dean's office for appropriate disciplinary action.

Grading Scale

	86 – 89.9% = B+	76 – 79.9% = C+	66 – 69.9% = D+
>94% = A	83 - 86% = B	73-76% = C	63 - 66% = D
89.9 – 94% = A-	79.9 – 83% = B-	69.9 – 73% = C-	59.9 – 63% = D-
			<59.9% = F

Additional Resources – Microbiome related websites and resources that may be helpful for finding papers for your assignments and presentation.
Microbiome Digest: https://microbiomedigest.com ; @MicrobiomDigest
MicroBEnet: http://www.microbe.net ; @microBEnet
@symbiosispapers   @phylogenomics   @ASMicrobiology
Science writer, Ed Yong - https://www.theatlantic.com/author/ed-yong/ : @edyong209

Authentication of Students in Online and Distance Learning Courses

UConn requires that instructors of all Distance Education course sections (currently defined by the Registrar as "Distance Learning" and "Online") ensure that students who register in these

courses are the same students who participate in and complete the course activities and assessments and receive academic credit. Thus, we will use HuskyCT as the primary repository and access point for course content, assessment, and activities, and students will use their NetID and password process to securely access course content/assessments.