Syllabus EEOB 8896.04
Symbioses
SP2021 (first 7 weeks) (1 CRedits)

# Course overview

## Instructors

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| Name | email | Office location |
| Alison Bennett | bennett.1242@osu.edu | 386 Aronoff |
| Rachelle Adams | adams.1970@osu.edu | MBD |
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## Course description

Symbioses are important drivers of community assembly and ecosystem services, and are found in numerous habitats. Microbial symbionts vary in their association with hosts—their association can range from obligate to dependent, they can live inside or outside of hosts, be transmitted vertically or horizontally, vary in genome size, and range from parasitic to mutualistic. At the extreme ends of these partnerships we find obligately mutualistic vertically transmitted microbes with reduced genomes living inside hosts. And yet several long-standing symbioses have existed for eons. Thus, in this seminar we ask what are the characteristics and traits that drive symbionts past the “point of no return”? Can movement along continuums by microbial symbionts be predicted by stoichiometry, eco-evolutionary feedbacks, or communication and signalling between partners? To this end we will read two papers per week on the topic, and discuss those papers.

## Course goals and learning outcomes

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| --- | --- |
| **Course Goals** | **Learning Outcomes** |
| Goal A – Identify how stoichiometry influences microbial symbioses | **Learning Outcome 1** - Explore symbioses that vary with shifts in nutrient or resource availability |
| **Learning Outcome 2** – Discuss commonalities between symbioses altered by stoichiometry |
| Goal B - Identify how eco-evolutionary feedbacks influences microbial symbioses | **Learning Outcome 3** - Recognize eco-evolutionary feedbacks that occur in microbial symbioses |
| **Learning Outcome 4** - Discuss commonalities between symbioses subject to eco-evolutionary feedbacks  |
| Goal C - Identify how singaling and communication between microbes and their partners alter symbioses | **Learning Outcome 6** - Understand the importance of signaling and communication in the establishment and maintenance of microbial symbioses |
| **Learning Outcome 7** - Discuss commonalities between symbioses that utilize signaling and communication |

## Course materials

* All course material will be shared via email and/or Carmen

# Course schedule and evaluation

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| --- | --- |
| **Week** | **Content** |
| 1 | Paper Discussion |
| 2 | Paper Discussion |
| 3 | Paper Discussion |
| 4 | Paper Discussion |
| 5 | Paper Discussion |
| 6 | Paper Discussion |
| 7 | Paper Discussion |

All paper discussions will be synchronous via Zoom.

Grades will be assigned based on attendance and participation in discussions. We expect students to have read both papers for class, and to ask at least one question and provide at least one comment on the readings during the class to gain participation points.

# COURSE POLICIES

## Attendance

If you cannot attend a class, it is a courtesy to inform your professor and any group or team members as soon as possible. Open communication regarding attendance is a key for this course.

## Communication

Faculty feedback and response time

We will reply to emails within **48 hours on days when class is in session at the university**.

Professional Behavior

As a member of a learning community you are expected to conduct yourself as a professional. For instance, be on time for class, do not leave the class while it is in progress for other than emergencies, turn off cell phones, be respectful of others’ viewpoints even if you disagree with them, and dress appropriately for a professional activity.

## Late Assignments

We do not anticipate any assignments, but if there are any late assignments will be accepted, with a penalty of one-point reduction per day. Full-point late submissions are only accepted in cases of emergency (illness or injury, family emergency) and with proper documentation.

# University Policies

## Academic Integrity/ Misconduct

If we suspect that a student has committed academic misconduct in this course, we are obligated by University Rules to report my suspicions to the Committee on Academic Misconduct. If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact us.

## Statement on Title IX

If you or someone you know has been harassed or discriminated against based on your sex or gender, including sexual harassment, sexual assault, relationship violence, stalking, or sexual exploitation, you may find information about your rights and options at titleix.osu.edu or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu." Title IX is part of the Office of Institutional Equity (OIE) at Ohio State, which responds to all bias-motivated incidents of harassment and discrimination, such as race, religion, national origin and disability. For more information on OIE, visit equity.osu.edu or email equity@osu.edu.

## Your Mental Health

You can reach an on-call counselor when CCS is closed at (614) 292-5766 and 24 hour emergency help is also available through the 24/7 National Prevention Hotline at 1-(800)-273-TALKor at suicidepreventionlifeline.org

## Diversity

Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

## Requesting accommodations

If you would like to request academic accommodations based on the impact of a disability qualified under the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, contact your instructor privately as soon as possible to discuss your specific needs. Discussions are confidential.