

Term Information

Effective Term Autumn 2022

General Information

Course Bulletin Listing/Subject Area Evol, Ecology & Organismal Bio
Fiscal Unit/Academic Org Evolution, Ecology & Org Bio - D0390
College/Academic Group Arts and Sciences
Level/Career Graduate, Undergraduate
Course Number/Catalog 5510
Course Title Interdisciplinary Team Science
Transcript Abbreviation Team Science
Course Description This course aims to teach students the necessary skills to lead or participate in scientific or interdisciplinary teams.
Semester Credit Hours/Units Fixed: 3

Offering Information

Length Of Course 14 Week
Flexibly Scheduled Course Never
Does any section of this course have a distance education component? No
Grading Basis Letter Grade
Repeatable No
Course Components Lecture, Seminar, Workshop
Grade Roster Component Lecture
Credit Available by Exam No
Admission Condition Course No
Off Campus Never
Campus of Offering Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites Open to graduate students in any field, or to final-year undergraduates with permission from the instructor.
Exclusions Not open to students with credit for ANTHROP 5510
Electronically Enforced Yes

Cross-Listings

Cross-Listings Crosslisted in ANTHROP

Subject/CIP Code

Subject/CIP Code 30.9999
Subsidy Level Doctoral Course
Intended Rank Senior, Masters, Doctoral

Requirement/Elective Designation

The course is an elective (for this or other units) or is a service course for other units

Course Details

Course goals or learning objectives/outcomes

- Be familiar with the Science of team science
- Know the best practices for building and leading interdisciplinary teams
- Communicate effectively within interdisciplinary teams
- Lead and collaborate effectively within an interdisciplinary team
- Build an interdisciplinary team that is intentionally collaborative, diverse, equitable, and inclusive.
- Create a collaboration plan for an interdisciplinary team

Content Topic List

- Introduction to and History of Team Science
- Diversity, Equity, and Inclusion
- Communication Skills
- Leadership Skills
- Building Scientific Teams
- Team Stages: Form, Storm, Norm, Perform
- Traits of Successful Teams
- Collaboration Plans
- Resolving Conflicts
- Collaborations Outside of Science or Academia
- Meeting Facilitations
- Assessment of Team Practices

Sought Concurrence

No

Attachments

- EEOB Curriculum Maps October 2021.xlsx: Curriculum Maps

(Other Supporting Documentation. Owner: Hamilton, Ian M)

- EEOB 5510 syllabus version 3.docx: Revised Syllabus

(Syllabus. Owner: Hamilton, Ian M)

- EEOB 5510 responses to panel comments.docx

(Other Supporting Documentation. Owner: Hamilton, Ian M)

Comments

- See feedback email sent to department 11/22/21 RLS *(by Steele, Rachel Lea on 11/22/2021 12:51 PM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Hamilton, Ian M	10/21/2021 09:36 AM	Submitted for Approval
Approved	Hamilton, Ian M	10/21/2021 09:36 AM	Unit Approval
Approved	Vankeerbergen, Bernadette Chantal	11/03/2021 09:51 AM	College Approval
Revision Requested	Steele, Rachel Lea	11/22/2021 12:51 PM	ASCCAO Approval
Submitted	Hamilton, Ian M	02/14/2022 10:41 AM	Submitted for Approval
Approved	Hamilton, Ian M	02/14/2022 10:41 AM	Unit Approval
Pending Approval	Vankeerbergen, Bernadette Chantal	02/14/2022 10:41 AM	College Approval

Please see responses in **red**

2. Anthropology 5510 new course, cross-listed with EEOB 5510; was approved by the Social and Behavioral Sciences Panel with **6 contingencies** and *2 recommendations*. The Natural and Mathematical Sciences Panel declined to vote on the proposal but looks forward to reviewing the course again once the contingencies of the SBS Panel have been met. Their feedback is also listed below.

- Comments from the Social and Behavioral Sciences Panel:
 - **Contingency: The Panel requests a detailed explanation articulating how students at various levels – junior/senior-level undergraduates vs. MA/PhD graduate students – will move through this course from beginning to end. Are there differential requirements, reading lists, and assignments? What are the descriptions for these assignments in the course? This rationale should demonstrate how a group of students at different levels might successfully navigate a class like this together – that there is a viable path through the course for both undergraduates and graduates. We have added a section in the syllabus explaining the paths for graduate and undergraduate students. Here is the text: (1) This course can be taken by undergraduate and graduate students. Graduate students complete all the weekly homework assignments and addenda. (2) As graduate students are more advanced in their studies, they are expected to mentor and support the learning of the undergraduates enrolled in class, which entails encouraging them to participate and guiding them through the activities in class. (3) In addition to the required readings, graduate students will also read recommended readings before coming to class on Tuesdays. (4) In the capstone assignment, graduate students will write a collaboration plan for the current research team or for the team that they would like to lead in the future. Undergraduates will write a collaboration plan for group work in one of their classes.**
 - **Contingency: The Panel asks that the department clarify the number of contact hours for this course. 55 minutes twice a week does not meet the minimum required for 3 credit hours; a class that meets biweekly would need to do so for sessions of 1 hour and 20 minutes in length. Done. We fixed that. Tuesdays and Thursdays 12:45 – 2:05 PM**
 - **Contingency: Since this course is not under consideration for DL status, the Panel requests that any language referring to the course as DL/delivered online be removed (ex., on the first page of the syllabus: “class will be taught in person if possible”). Done.**
 - **Contingency: The Panel understands that the nature of this course makes it such that readings might vary from term to term, especially when taught by different instructors. However, in order to assess if the proposed workload is suitable to a 3-credit-hour class, the Panel**

asks that an exemplar list of readings, with page numbers, be included in the course schedule. We do not expect that the readings will change much from semester to semester – at least not more than for any other course. We have added a list of readings and reading load.

- **Contingency:** The Panel asks that the department include the most up-to-date version of the University’s disability services statement, which can be found here: <https://asccas.osu.edu/curriculum/syllabus-elements> We have updated the Title IX statement and used the same one as for EEOB 5505.

 - **Contingency:** The Mental Health Statement on the last page of the syllabus is not appropriate for ASC students. They should not be referred to the College of Pharmacy for mental health issues. This is a statement appropriate for courses taught in the College of Pharmacy. Please see <https://asccas.osu.edu/curriculum/syllabus-elements> We have updated the Title IX statement and used the same one as for EEOB 5505.

 - *Recommendation:* The Panel recommends that the department include the most up-to-date version of the Title IX statement, which can be found here: <https://asccas.osu.edu/curriculum/syllabus-elements> We have updated the Title IX statement and used the same one as for EEOB 5505.
 - *Recommendation:* The Panel questioned why the course was not integrated into the Medical Anthropology curriculum map like with other subfield groups. The Panel recommends including the course in the Medical Anthropology major. After discussion with the lead of the medical anthropology program, we have decided for now not to list this course as an elective for the BA and BS in medical anthropology.
- Comments from the Natural and Mathematical Sciences Panel:
 - The Panel is enthusiastic about this course, and requests that the department widely advertise the course throughout the college and university when it is offered. We are also looking forward to teaching students from across campus.
 - The Natural and Mathematical Sciences Panel concurs with the contingencies, recommendations, and comments of the SBS Panel.
 - The Panel suggests re-visiting the absence policy (syllabus pg. 6 under “Absence Policy”) and including language about excused vs. unexcused absences. The Panel also recommends referring students to Student Advocacy or providing other guidance regarding what a student should do if they have a legitimate reason for more than two absences. We have

updated the student participation requirements. The text is as follows: You are expected to be actively engaged in class; that is, coming to class prepared, paying attention, and contributing to discussions and problem solving, both by making comments and by facilitating other people's participation. Because it is difficult to do well in the course if sessions are missed attendance at every class meeting is required. Late arrival and early departure are considered poor participation; they are disruptive to others and make it likely to miss essential information.

- The Panel requests that the department be mindful about making the course materials and assignments relevant and accessible to all students, particularly given the nature of the course design in which speakers may vary from one offering to another. They note that, by design, this course will likely have a diverse student population of undergraduate and graduate students from many different disciplines, each of whom will have different areas and levels of expertise. We are currently teaching the course and have found that the readings that we selected are accessible to all students. Of course, currently only graduate students are enrolled, but we will keep that in mind for the next time it is taught and undergraduates sign up.
- The Panel asks that department clarify the following regarding the team/group project (syllabus pg. 6 under "Collaboration Plan"): This is an individual assignment. Students will develop a collaboration plan for their current research team or the team that they want to lead in the future. This is not a group project.
 1. How will teams be assigned?
 2. How will the work of the team be evaluated?
 3. Will all members of the same team receive the same grade, or will there be individual grades within the group project?
- The Panel expressed confusion about the nature of the teams, the assignments and how students will be assessed. The Panel believes that these concerns are linked to the concerns of the SBS Panel, and as such, they would like to review the course again after the contingencies of the SBS Panel have been met. We hope that the syllabus is clearer now.

Interdisciplinary Team Science

EEOB 5510

Autumn 2022

Course Information

- **Course times and location:** Tuesdays and Thursdays 12:45 – 2:05 PM
- **Credit hours:** 3
- **Mode of delivery:** In person
- **Communication:** Class-wide communications will be sent through the Announcements tool in CarmenCanvas. Please check your [notification preferences](#) to be sure you receive these messages.

Instructor

- **Name:** Alison Bennett
- **Email:** bennett.1242@osu.edu
- **Office location:** 386 Aronoff Laboratory
- **Office hours:** By appointment
- **Preferred means of communication:** email

Course Description

The goal of this course is to teach students the skills to effectively collaborate in interdisciplinary teams. Funding agencies worldwide, including the NSF, are placing greater emphasis on interdisciplinary research. For example, the NSF has identified “Growing Convergence Research” as one of its 10 Big Ideas. True convergence research requires the development of interdisciplinary scientific teams (groups of two or more working collaboratively to solve a problem). However, graduate students are often siloed within programs, and not necessarily trained to engage with others outside their field. This course aims to teach students the necessary skills to lead and participate in scientific or interdisciplinary teams.



Course Goal and Learning Outcomes

The goal of this course is **to train graduate students the skills to effectively collaborate in interdisciplinary teams**. This entails that students will be able to meet the following learning outcomes.

1. Be familiar with the science of team science.

- Explain the main objectives and concepts of team science
- Describe the history of team science and the science of team science
- Explain the challenges and opportunities of team science
- Appreciate how a team science approach can improve interdisciplinary teams.

2. Know the best practices for building and leading interdisciplinary teams.

- Locate resources for best practices in team science
- Articulate the traits of successful interdisciplinary teams
- Describe the stages of team formation and steps in building successful teams
- Describe the key leadership skills useful in interdisciplinary teams

3. Communicate effectively within interdisciplinary teams.

- Recognize how disciplinary and personal backgrounds shape how team members approach the team project.
- Reflect on how one's own disciplinary and personal background shapes one's own approach to the team project.
- Explain clearly key concepts and methods from one's own discipline to team members from other disciplines.
- Ask for clarifications from other team members when concepts and methods from other disciplines are not clear or familiar.
- Check for agreement on key concepts and methods used in the team project to ensure a shared understanding.
- Appreciate diversity in disciplinary and personal backgrounds and how they contribute to the team project.

4. Recognize individual qualities necessary to be successful in interdisciplinary team science.

- Identify the habits and attributes of effective collaborators that facilitate effective group interactions.
- Adopt and employ habits used by effective collaborators in diverse, transdisciplinary teams.
- Reflect on one's strengths in collaborative competencies and identify the ones that need further development.
- Seek mentorship and mentor others regarding collaborative behaviors and habits.



- 5. Build an interdisciplinary team that is intentionally collaborative, diverse, equitable, and inclusive.**
 - Identify potential team members that represent diverse backgrounds and expertise.
 - Include team members in the research activity through collaboration in the project design, implementation, and evaluation.
 - Consider how tasks and responsibilities are administered fairly and equitably among research collaborators and participants.
 - Recognize how to leverage diverse perspectives and expertise during all project phases.
 - Create trust in interdisciplinary teams by participating in activities, listening to others, demonstrating interest, and representing other perspectives with respect.

- 6. Create a collaboration plan for an interdisciplinary team.**
 - Formulate a team vision, mission, and objectives.
 - Describe the roles and responsibilities of the team members.
 - Describe the management processes for decision-making and conflict resolution
 - Identify the communication technologies used to support team functioning
 - Identify potential outputs, including authorship and attribution policies
 - Develop a plan for implementation and maintenance of the collaboration plan



How This Course Works

This course is organized in two main sections. The first section covers the four overarching themes of the course: outcomes, diversity, communication, and leadership. The second section covers team formation, functioning, and maintenance.

The **weekly modules** in CarmenCanvas are organized as follows:

- An **overview page** that describes the learning goals and activities for that particular week.
- Links to required and recommended **readings / videos / podcasts**.
- **Addenda**: At the end of every week – before Friday midnight – you have to submit a paragraph or two (certainly no longer than one page) in which you reflect on what you learned that week from the guests, readings, assignments, and discussions. The goal of the addenda is for you to develop your own conceptual framework of interdisciplinary team science. There will be 14 addenda (and you can skip two of them).
- **Homework assignments**: There are different types of weekly homework assignments, that help you explore, develop, practice, and reflect on your interdisciplinary team skills:
 - **Psychometric assessments (PA)**: There will be a three psychometric assessments, including a motivation (MATRICx), problem-solving (FourSight), and leadership (LENA) assessment, that give you better insight in your motivations and competencies for interdisciplinary team science.
 - **Collaboration plan sections (CP)**: There will be seven weekly homework assignments in which you develop the first draft of the collaboration plan including: (1) team vision, mission, and objectives; (2) team outputs; (3) people, roles, and responsibilities; (4) team culture; (5) team processes and functioning; (6) project management and infrastructure; and (7) implementation and maintenance of the collaboration plan
 - **Reflection essays (RE)**: There are three two-page essays focused on key themes in the course, including (1) diversity, equity, and inclusion; (2) leadership; and (3) future career as interdisciplinary researcher.
- **Collaboration plan**: The capstone assignment is a collaboration plan for your (current or future) interdisciplinary science team with the following sections: (1) team vision, mission, and objectives; (2) people, roles, and responsibilities; (3) team outputs; (4) team culture; (5) team processes and functioning; (6) project management and infrastructure; and (7) implementation and maintenance of the collaboration plan. Detailed instructions will be provided in CarmenCanvas.



Expectations for graduate students.

- This course can be taken by undergraduate and graduate students. Graduate students complete all the weekly homework assignments and addenda.
- As graduate students are more advanced in their studies, they are expected to mentor and support the learning of the undergraduates enrolled in class, which entails encouraging them to participate and guiding them through the activities in class.
- In addition to the required readings, graduate students will also read recommended readings before coming to class on Tuesdays.
- In the capstone assignment, graduate students will write a collaboration plan for the current research team or for the team that they would like to lead in the future. Undergraduates will write a collaboration plan for group work in one of their classes.

Credit hours and work expectations: This is a 3 credit-hour course. According to [Ohio State bylaws on instruction](http://go.osu.edu/credithours) (go.osu.edu/credithours), students should expect around 3 hours per week of time spent on direct instruction (instructor content and Carmen activities, for example) in addition to 6 hours of homework (reading and assignment preparation, for example) to receive a grade of C average.

Course Materials

All required and recommended readings and course materials will be made available in CarmenCanvas course.

How Your Grade is Calculated

Assignment Category	Percentage
Participation	15%
Addenda	15%
Homework assignments	35%
Collaboration plan	35%
Total	100%

See [Course Schedule](#) for due dates.

Late Assignments

Please refer to CarmenCanvas for due dates. Due dates are set to help you stay on pace and to allow timely feedback that will help you complete subsequent assignments.

Grading Scale

Final grades are based on the following grading scheme: A 93; 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 60-66; E < 60.



Course Schedule

Refer to the CarmenCanvas course for up-to-date due dates. **All the assignments are due before midnight.**

Week	Topic	Assignments
1	Introduction	HW1: motivation assessment (PA1)
2	Theme1: Communication	HW2: vision, mission, objectives (CP1)
3	Theme 2: Outcomes	HW3: team outputs (CP2)
4	Theme 3: Diversity	HW4: DEI reflection essay (RE1)
5	Theme 4: Leadership	HW5: leadership assessment (PA2)
6	Building teams I	HW6: people, roles, responsibilities (CP3)
7	Building teams II	HW7: problem-solving assessment (PA3)
8	Team stages	HW8: team culture (CP4)
9	Collaboration plans I	HW9: processes, functioning (CP5)
10	Collaboration plans II	HW10: leadership reflection essay (RE2)
11	Conflict resolution I	HW11: management, infrastructure (CP6)
12	Conflict resolution II	HW12: implementation, maintenance (CP7)
13	Collaborations outside academia	HW13: team science elevator pitch
14	Assessment	HW14: career reflection essay (RE3)
Finals		Capstone: Collaboration plan



Required readings

All the required readings are available in weekly modules in CarmenCanvas.

Bennett, L. M., H. Gadlin, and S. Levine-Finley. 2018. *Collaboration and team science: A field guide*. Bethesda (MD): National Institutes of Health.

Cooke, Nancy J., and Margaret L. Hilton, eds. 2015. *Enhancing the Effectiveness of Team Science*. Edited by Committee on the Science of Team Science, C. Board on Behavioral, and Sensory Sciences, , Division of Behavioral and Social Sciences and Education and National Research Council. Washington DC: National Academies Press.

Currie, Margaret, Christopher (Kit) J. A. Macleod, Annemarieke de Bruin, Carly Maynard, Gabriele Bammer, Laura Meagher, Alister Scott, Mark Reed, and Colin Campbell. 2016. Working together for better outcomes: good practice for interdisciplinary researchers. In *Working Together for Better Outcomes*. Edinburgh, UK.

DeHart, Dana. 2019. Team science: A qualitative study of benefits, challenges, and lessons learned. *The Social Science Journal* 54 (4):458-467.

Graef, Dana J., Jonathan G. Kramer, and Nicole Motzer. 2021. *Facilitating Interdisciplinary Meetings: A Practical Guide*. Annapolis, MD: National Socio-Environmental Synthesis Center (SESYNC).

Hall, Kara L., Kevin Crowston, and Amanda L. Vogel. 2014. How to Write a Collaboration Plan.

Hall, K. L., A. L. Vogel, G. C. Huang, K. J. Serrano, E. L. Rice, S. P. Tsakraklides, and S. M. Fiore. 2018. The science of team science: A review of the empirical evidence and research gaps on collaboration in science. *Am Psychol* 73 (4):532-548.

Hall, Kara L., Amanda L. Vogel, and Robert T. Croyle, eds. 2019. *Strategies for Team Science Success: Handbook of Evidence-Based Principles for Cross-Disciplinary Science and Practical Lessons Learned from Health Researchers*. Cham (Switzerland): Springer Nature.

Hardavella, G., A. Aamli-Gagnat, N. Saad, I. Rousalova, and K. B. Sreter. 2017. How to give and receive feedback effectively. *Breathe (Sheff)* 13 (4):327-333.

Harro, B. 2000. The Cycle of Socialization. In *Readings for Diversity and Social Justice*, edited by M. Adams: Routledge.

Lotrecchiano, G. R., T. R. Mallinson, T. Leblanc-Beaudoin, L. S. Schwartz, D. Lazar, and H. J. Falk-Krzesinski. 2016. Individual motivation and threat indicators of collaboration readiness in scientific knowledge producing teams: a scoping review and domain analysis. *Heliyon* 2 (5).

Lotrecchiano, G. R., L. Schwartz, and H. J. Falk-Krzesinski. 2020. Measuring motivation for team science collaboration in health teams. *J Clin Transl Sci* 5 (1):e84.



Mariotti, Sergio. 2021. A new alliance between the natural and human sciences. In *Integration and implementation insights*.

Mojica Rey, Camille. 2008. Team Science and the Diversity Advantage. *Science*.

Philips, Katherine W. 2017. What is the real value of diversity in organizations? Questioning our assumptions. In *The diversity bonus: How great teams pay off in the knowledge economy*, edited by S. E. Page. Princeton (NJ): Princeton University Press.

Rolland, B., and J. D. Potter. 2017. On the Facilitation of Collaborative Research: Enter Stage Left, the Consortium Director. *Cancer Epidemiol Biomarkers Prev* 26 (11):1581-1582.

Smith-Doerr, Laurel, Sharla N. Alegria, and Timothy Sacco. 2017. How Diversity Matters in the US Science and Engineering Workforce: A Critical Review Considering Integration in Teams, Fields, and Organizational Contexts. *Engaging Science, Technology, and Society* 3.

Tuckman, Bruce W. 1965. Developmental sequence in small groups. *Psychological Bulletin* 63 (6):384-399.

Wolfe, A. D., K. B. Hoang, and S. F. Denniston. 2018. Teaching Conflict Resolution in Medicine: Lessons From Business, Diplomacy, and Theatre. *MedEdPORTAL* 14:10672.

Zeng, A., Y. Fan, Z. Di, Y. Wang, and S. Havlin. 2021. Fresh teams are associated with original and multidisciplinary research. *Nature Human Behavior* x (x):xx-xxx.

Instructor Feedback and Response Time

Remember that you can call [614-688-4357 \(HELP\)](tel:614-688-4357) at any time if you have a technical problem.

- **Preferred contact method:** If you have a question, please contact me first through my Ohio State email address. I will reply to emails within **48 hours during week days when class is in session at the university**.
- **Grading and feedback:** For assignments submitted before the due date, I will try to provide feedback and grades within **seven days**. Assignments submitted after the due date may have reduced feedback, and grades may take longer to be posted.

Required Equipment

- **Computer:** current Mac (MacOS) or PC (Windows 10) with high-speed internet connection
- **Other:** a mobile device (smartphone or tablet) to use for BuckeyePass authentication

If you do not have access to the technology you need to succeed in this class, review options for technology and internet access at go.osu.edu/student-tech-access.

CarmenCanvas Access

You will need to use [BuckeyePass](http://buckeyepass.osu.edu) (buckeyepass.osu.edu) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you do each of the following:

- Register multiple devices in case something happens to your primary device. Visit the [BuckeyePass - Adding a Device](http://go.osu.edu/add-device) (go.osu.edu/add-device) help article for step-by-step instructions.
- Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click **Enter a Passcode** and then click the **Text me new codes** button that appears. This will text you ten passcodes good for 365 days that can each be used once.
- [Install the Duo Mobile application](http://go.osu.edu/install-duo) (go.osu.edu/install-duo) on all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service.

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at [614-688-4357 \(HELP\)](tel:614-688-4357) and IT support staff will work out a solution with you.

Technology Skills Needed for this Course

- Basic computer and web-browsing skills
- [Navigating CarmenCanvas](http://go.osu.edu/canvasstudent) (go.osu.edu/canvasstudent)

- [CarmenZoom virtual meetings](https://go.osu.edu/zoom-meetings) (go.osu.edu/zoom-meetings)

Technology Support

For help with your password, university email, CarmenCanvas, or any other technology issues, questions or requests, contact the IT Service Desk, which offers 24-hour support, seven days a week.

- **Self Service and Chat:** go.osu.edu/it
- **Phone:** [614-688-4357 \(HELP\)](tel:614-688-4357)
- **Email:** servicedesk@osu.edu



Other Course Policies

Land Acknowledgement

the Ohio State University acknowledges that its campuses have long served as sites of meeting and exchange for Indigenous peoples, including those in historical times known as the Shawnee, Potawatomi, Miami, Wyandotte, Delaware, and the People of Fort Ancient, Hopewell, and Adena cultures also known as the earthworks builders, as well as other tribal nations of the region. The Ohio State University resides on land ceded in the 1795 Treaty of Greenville and the forced removal of tribes through the Indian Removal Act of 1830. I honor the resiliency of these tribal nations and recognize the historical contexts that has and continues to affect the Indigenous people of this land. *In addition, we acknowledge that over 614,000 acres of traditional Indigenous Peoples land were purchased, seized, or stolen by the U.S. Congress following the 1862 Morrill Land Grant Act. These lands produced a 10-fold profit for the development of United States public institutions, from which The Ohio State University was made possible in 1870.* <https://www.landgrabu.org/universities/ohio-state-university>

Discussion and Communication Guidelines

The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

- **Writing style:** While there is no need to participate in class discussions as if you were writing a research paper, you should remember to write using good grammar, spelling, and punctuation. A more conversational tone is fine for non-academic topics.
- **Tone and civility:** Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm doesn't always come across online. I will provide specific guidance for discussions on controversial or personal topics.
- **Citing your sources:** When we have academic discussions, please cite your sources to back up what you say. For the textbook or other course materials, list at least the title and page numbers. For online sources, include a link.
- **Backing up your work:** Consider composing your academic posts in a word processor, where you can save your work, and then copying into the CarmenCanvas discussion.

Academic Integrity Policy

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the university's [Code of Student Conduct](http://studentconduct.osu.edu) (studentconduct.osu.edu), and that all students will complete all academic and scholarly assignments with fairness and

honesty. Students must recognize that failure to follow the rules and guidelines established in the university's *Code of Student Conduct* and this syllabus may constitute "Academic Misconduct."

The Ohio State University's *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the university or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the university's *Code of Student Conduct* is never considered an excuse for academic misconduct, so I recommend that you review the *Code of Student Conduct* and, specifically, the sections dealing with academic misconduct.

If I suspect that a student has committed academic misconduct in this course, I am obligated by university rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the university's Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the university. If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- [Committee on Academic Misconduct](http://go.osu.edu/coam) (go.osu.edu/coam)
- [Ten Suggestions for Preserving Academic Integrity](http://go.osu.edu/ten-suggestions) (go.osu.edu/ten-suggestions)
- [Eight Cardinal Rules of Academic Integrity](http://go.osu.edu/cardinal-rules) (go.osu.edu/cardinal-rules)

Copyright Disclaimer

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Student Well-Being

The well-being of students is of primary importance. If you are facing any challenges related to your physical or mental health, or obstacles like food or housing insecurity, please do not hesitate to get in touch to discuss ways we can put you in the best possible position to succeed.

Title IX Statement

The Ohio State University is committed to building and maintaining a community to reflect diversity and to improve opportunities for all. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Office of Institutional Equity:

1. Online reporting form at equity.osu.edu,
2. Call 614-247-5838 or TTY 614-688-8605,
3. Or email equity@osu.edu

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Office of Institutional Equity to ensure the university can take appropriate action:

- All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately.
- The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. any human resource professional (HRP); 2. anyone who supervises faculty, staff, students, or volunteers; 3. chair/director; and 4. faculty member.

Your Mental Health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. No matter where you are engaged in distance learning, The Ohio State University's Student Life Counseling and Consultation Service (CCS) is here to support you. If you find yourself feeling isolated, anxious or overwhelmed, [on-demand mental health resources](https://go.osu.edu/ccsondemand) (go.osu.edu/ccsondemand) are available. You can reach an on-call counselor when CCS is

closed at [614- 292-5766](tel:614-292-5766). **24-hour emergency help** is available through the [National Suicide Prevention Lifeline website](https://www.suicidpreventionlifeline.org) (suicidpreventionlifeline.org) or by calling [1-800-273-8255\(TALK\)](tel:1-800-273-8255). [The Ohio State Wellness app](https://go.osu.edu/wellnessapp) (go.osu.edu/wellnessapp) is also a great resource.

Accessibility Accommodations

The university strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability including mental health, chronic or temporary medical conditions, please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with [Student Life Disability Services \(SLDS\)](#). After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through the university's request process, managed by Student Life Disability Services.

Disability Services Contact Information

- Phone: [614-292-3307](tel:614-292-3307)
- Website: slds.osu.edu
- Email: slds@osu.edu
- In person: [Baker Hall 098, 113 W. 12th Avenue](#)

Accessibility of Course Technology

This online course requires use of CarmenCanvas (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations as early as possible.

- [CarmenCanvas accessibility](https://go.osu.edu/canvas-accessibility) (go.osu.edu/canvas-accessibility)
- Streaming audio and video
- [CarmenZoom accessibility](https://go.osu.edu/zoom-accessibility) (go.osu.edu/zoom-accessibility)

Course Listing and Curriculum Map for the Evolution and Eco

Required supportive courses (do not count towards hours in the ma

Requirements	Semester Course Number	Course Title	Semester Units
Biology	BIOL 1113	Introductory Biology	4
Biology	BIOL 1114	Introductory Biology	4
Math	MATH 1151	Calculus 1	5
General Chemistry	CHEM 1210, 1220	General Chemistry	10
Organic Chemistry	CHEM 2310 or CHEM 2510	Organic Chemistry	4
Physics	1250 & 1251 OR 1200 & 1201	General Physics	10
Statistics	STAT 2480	Statistics for Life Sciences	3

Required core courses

Requirements	Semester Course Number	Course Title	Semester Units
	EEOB 3310 or 3310H	Evolution	4
	EEOB 3410 or 3410H	Ecology	4
	BIOL 3401	Integrated Biology	4
	MATH or STAT	Advanced quantitative analysis course	

Elective courses in Biodiversity (choose at least two)

Requirements	Semester Course Number	Course Title	Semester Units
	EEOB 2210	Ohio Plants	2
	EEOB 2220	Ohio Birds	2
	EEOB 3320	Organismal Diversity	2
	EEOB 4210	Evolution & Ecology: Vertebrates	2
	EEOB 4220	Evolution & Ecology: Mammals	3
	EEOB 4230	Evolution & Ecology: Invertebrates	2
	EEOB 4240	Evolution & Ecology: Plants & People	2

Elective courses in Evolution and Ecology (choose at least two)

Requirements	Semester Course Number	Course Title	Semester Units
	EEOB 3420	Behavioral Ecology	4
	EEOB 4410	Conservation Biology	3
	EEOB 4420	Tropical Field Studies	2
	EEOB 4430	Ecological Methods I	1
	EEOB 5310	Advanced Evolution	3
	EEOB 5320	Creation & Evolution	3
	EEOB 5410	Ocean Ecology	1.5
	EEOB 5420	Ecology of Inland Waters	1.5
	EEOB 5430	Fish Ecology	1.5
	EEOB 5450	Population Ecology	3
	EEOB 5460	Physiological Ecology	3
	EEOB 5470	Community Ecosystem Ecology	3

All elective courses in EEOB that could count toward major

	EEOB 2210	Ohio Plants	2
	EEOB 2220	Ohio Birds	2
	EEOB 2250	Dynamics of Dinosaurs	1.5
	EEOB 2410	Biological Invasions	3
	EEOB 2510	Human Anatomy	3
	EEOB 2520	Human Physiology	3

EEOB 3189	UG Field Experience or Work	1-3
EEOB 3191	UG Internship	1-3
EEOB 3193	UG Individual Studies	1-3
EEOB 3270	Infectious disease ecology, evolution, and transmission	3
EEOB 3320	Organismal Diversity	3
EEOB 3420	Behavioral Ecology	4
EEOB 3510	Cellular & Developmental Biology	3
EEOB 3520	Micro Anatomy	1.5
EEOB 3797	UG Foreign Study	1-12
EEOB 3798	UG Study Tour	1-12
EEOB 4210	Evolution & Ecology: Vertebrates	2
EEOB 4220	Evolution & Ecology: Mammals	3
EEOB 4320	Evolution & Ecology: Invertebrates	2
EEOB 4240	Evolution & Ecology: Plants & People	2
EEOB 4410	Conservation Biology	3
EEOB 4420H	Tropical Field Studies	2
EEOB 4430	Ecological Methods I	2
EEOB 4510	Comparative Vertebrate Anatomy	3
EEOB 4520	Comparative Physiology	3
EEOB 4520H	Comparative Physiology - Honors	3
EEOB 4550	Neurobiology of Behavior	3
EEOB 4560	Endocrinology	2
EEOB 4910	Plant Biology for Teachers (Stone Lab)	2
EEOB 4920	Ornithology for Teachers (Stone Lab)	2
EEOB 4930	Stream Ecology for Teachers (Stone Lab)	2
EEOB 4950	Field Ecology (Stone Lab)	2
EEOB 4998	UG Research	1-3
EEOB 4998H	UG Research - Honors	1-3
EEOB 4999	UG Thesis Research	1-5
EEOB 4999H	UG Thesis Research - Honors	1-5
EEOB 5189	Field Work	1-4
EEOB 5194	Bioacoustic Ecology	2
EEOB 5194	Host-Microbial Symbioses	3

EEOB 5310	Advanced Evolution	3
EEOB 5320	Society & Evolution	3
EEOB 5330	Population Genetics & Phylogeography	3
EEOB 5340	Evolution & Taxonomy of Vascular Plants	3
EEOB 5350	Evolutionary Ecology	3
EEOB 5410	Ocean Ecology	1.5
EEOB 5420	Ecology of Inland Waters	1.5
EEOB 5430	Fish Ecology	1.5
EEOB 5440	Plankton Ecology	3
EEOB 5450	Population Ecology	3
EEOB 5460	Physiological Ecology	3
EEOB 5470	Community & Ecosystem Ecology	3
EEOB 5480	Advanced Plant Ecology	3
EEOB 5490	Insect Behavior: Mechanisms and Function	3
EEOB 5505	Wicked Science	3
EEOB 5510	Interdisciplinary Team Science	3
EEOB 5610S	Translating Evolution	3
EEOB 5798	Tropical Behavioral Ecology & Evolution	3
EEOB 5910	Field Herpetology (Stone Lab)	2
EEOB 5920	Field Biology of Aquatic & Wetland Plants (Stone Lab)	3
EEOB 5930	Ichthyology (Stone Lab)	3
EEOB 5940	Field Zoology (Stone Lab)	3
EEOB 5950	Algae Identification Workshop (Stone Lab)	0.5
EEOB 5960	Plankton Identification Workshop (Stone Lab)	0.5
EEOB 5970	Larval Fish Identification Workshop (Stone Lab)	0.5

Program Learning Goals

1. Students are able to describe the processes that underlie evolution and their manifestation in th

2. Students are able to explain ecological concepts, methods of study, and the interactions among organisms and between organisms and their environment.
3. Students are able to understand organismal diversity and functioning at all levels, from the molecular and cellular to the organismal level, and understand the interplay between organismal functioning and ecological and evolutionary processes.
4. Students participate in the process of discovery by conducting experimental and observational studies, synthesizing research, and communicating their questions, hypotheses, observations, and experiences to other students and faculty.
5. Students demonstrate proficiency in mathematics, statistics, computer modeling, and the use of computers, as appropriate to the field.
6. Students know the theoretical framework of evolution, ecology and organismal biology and understand science as a process as it relates to these three disciplines within biology.
7. Students are aware of current issues in biology, especially those that have significant ethical and societal implications, and apply scientific concepts and processes.

Notes

Program goal numbers that have no asterisk indicate a beginner level; * = intermediate level; ** = advanced level.

Honors versions of courses may be substituted in all cases.

No more than three units of S/U credit can count toward the major.

ology Major
ajor)

Notes

Relevant Program Goals

1, 2, 3

1, 2, 3

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4

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Relevant Program Goals

1*, 3*, 5*, 6*, 7*

2*, 3*, 5*

1*, 2*, 3*

5*

Notes

Relevant Program Goals

1, 2, 3, 4, 6, 7
1, 2, 3, 4, 6, 7
1*, 2*, 3*, 4*, 7*
1*, 2*, 3*, 4*
1*, 2*, 3*, 4*
1*, 2*, 3*, 4*
1*, 2*, 3*, 4*, 7*

Relevant Program Goals

Relevant Program Goals

2*, 3*
2*, 5*, 7*
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2*, 3*, 5
1**, 2*, 3**, 4*, 5*, 6**,
7**
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 1**, 2**, 3**, 4**, 6**, 7**

Cross-listed with ENTO 5490

Cross-listed with ANTHROP 5505

4*, 5, 6**

Cross-listed with ANTHROP 5505

4*, 5, 6**

SL Course in sci comm

1**, 4**, 6**

Field course at Smithsonian Tropical
 Research Institute, Panama

1**, 2**, 3**, 4**, 6**

1*, 2*, 3*

1*, 2*, 3*

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1*, 2*, 3*

3*

3*

3*

ie natural world.

between organisms and their environment.

from the whole organism, and will
involve processes.

consistent with the primary literature, and
its.

and these topics relate to biology.

process, including the history of science

and will be able to communicate