

# ENTMLGY 4000 Syllabus

General Entomology Lecture DL  
AU 2022

## Course Information

- **Course times and location:** No required scheduled meetings; all instruction occurs in Carmen each week.
- **Credit hours:** 3
- **Mode of delivery:** 100% online

## Instructor

- **Name:** Joe Raczkowski
- **Email:** [raczkowski.2@osu.edu](mailto:raczkowski.2@osu.edu)
- **Phone Number:** 614-688-1054
- **Office location:** 257B, Howlett Hall
- **Office hours:** Please email instructor to schedule an appointment
- **Preferred means of communication:**
  - My preferred method of communication for questions is **email**.
  - My class-wide communications will be sent through the Announcements tool in CarmenCanvas. Please check your [notification preferences](https://go.osu.edu/canvas-notifications) (go.osu.edu/canvas-notifications) to be sure you receive these messages.

## Grader

- **Name:** Alden Siperstein
- **Email:** [siperstein.1@buckeyemail.osu.edu](mailto:siperstein.1@buckeyemail.osu.edu)

## Course Prerequisites

Biology 1113, 1113H, 1114, or 1114H



## Course Description

The course serves both as a single, concise exposure to the subject and as a foundation for advanced work in entomology (systematics, evolution, ecology, management). Lectures cover all fundamental aspects but emphasize basic biological phenomena, including diversity, evolution, classification, structure, function, development, reproduction, behavior, and ecology.

## Learning Outcomes

By the end of this course, students should successfully be able to:

- Discuss and explain major events in arthropod and insect evolution and unique aspects of their biology that have contributed to their diversity.
- Evaluate phylogenetic arguments for the placement of various invertebrate taxa.
- Compare and contrast human and insect respiratory, endocrine, digestive, circulatory, and reproductive systems.
- Examine the role that insects have played in the fields of genetics and molecular biology.
- Generate hypotheses on the origins of social behavior different insect groups.
- Articulate the positive and negative impacts that insects have on agriculture as well as on human and veterinary medicine.
- Predict the best methods for managing insect pests in different contexts.
- Summarize several primary research articles on an interesting aspect of insect biology in written reports and communicate their findings to the class.



# How This Course Works

**Mode of delivery:** This course is 100% online. There are no required sessions when you must be logged in to Carmen at a scheduled time.

**Pace of online activities:** This course is divided into **weekly modules** that are released at the beginning of each week. Students are expected to keep pace with deadlines (Quizzes, Exams, Writing Assignments) but may schedule their efforts freely within that time frame.

**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 (quiz/exam/assignment preparation, for example) to receive a grade of C average.



# Course Materials, Fees and Technologies

## Required Materials

- The Insects: An Outline of Entomology, 5th Edition. 2010. P.J. Gullan and P.S. Cranston. Wiley-Blackwell

## 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](https://go.osu.edu/student-tech-access) (go.osu.edu/student-tech-access).

## Required Software

**Microsoft Office 365:** All Ohio State students are now eligible for free Microsoft Office 365. Visit the [installing Office 365](https://go.osu.edu/office365help) (go.osu.edu/office365help) help article for full instructions.

## CarmenCanvas Access

You will need to use [BuckeyePass](https://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](https://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](https://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](https://go.osu.edu/canvasstudent) (go.osu.edu/canvasstudent)

## 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](https://go.osu.edu/it)
- **Phone:** [614-688-4357 \(HELP\)](tel:614-688-4357)
- **Email:** [servicedesk@osu.edu](mailto:servicedesk@osu.edu)



# Grading and Faculty Response

## How Your Grade is Calculated

| Assignment Category     | Percentage of Final Grade |
|-------------------------|---------------------------|
| Quizzes (5)             | 20%                       |
| Exam 1                  | 20%                       |
| Exam 2                  | 20%                       |
| Writing Assignments (3) | 15%                       |
| Final Exam              | 25%                       |

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

## Descriptions of Major Course Assignments

### Quizzes

**Description:** Quizzes are meant to test a student's knowledge of ~ 2 weeks of course content.

**Academic integrity and collaboration:** Quizzes are meant to assess individual student learning. Students should not work together on these timed quizzes.

### Writing Assignments

**Description:** These assignments are designed to expose students to various areas of entomological research via reading peer-reviewed scientific journal articles and reporting their findings in a written format.

**Academic integrity and collaboration:** Your written assignments should be your own original work.

## Exams 1 and 2

**Description:** Exams 1 and 2 are meant to test a student's knowledge of ~ 7 weeks of course content.

**Academic integrity and collaboration:** Exams 1 and 2 are meant to assess individual student learning. Students should not work together on these timed exams.

## Final Exam

**Description:** The Final Exam is meant to test a student's knowledge of all course content.

**Academic integrity and collaboration:** The Final Exam is meant to assess individual student learning. Students should not work together on this timed exam.

## Late Assignments

Please refer to Carmen 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.

Late assignments are subject to a 10% reduction per 24-hour period they are late, without an excused absence.

## Instructor Feedback and Response Time

I am providing the following list to give you an idea of my intended availability throughout the course. 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 **24 hours on days when class is in session at the university**.
- **Class announcements:** I will send all important class-wide messages through the Announcements tool in CarmenCanvas. Please check [your notification preferences](http://go.osu.edu/canvas-notifications) (go.osu.edu/canvas-notifications) to ensure you receive these messages.
- **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.

## Grading Scale

93–100: A

90–92.9: A-

87–89.9: B+

83–86.9: B

80–82.9: B-

77–79.9: C+

73–76.9: C

70–72.9: C-

67–69.9: D+

60–66.9: D

Below 60: E





# Other Course Policies

## Academic Integrity Policy

See [Descriptions of Major Course Assignments](#) for specific guidelines about collaboration and academic integrity in the context of this online class.

### Ohio State's 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](#) ([studentconduct.osu.edu](http://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](http://go.osu.edu/coam))
- [Ten Suggestions for Preserving Academic Integrity](http://go.osu.edu/ten-suggestions) ([go.osu.edu/ten-suggestions](http://go.osu.edu/ten-suggestions))
- [Eight Cardinal Rules of Academic Integrity](http://go.osu.edu/cardinal-rules) ([go.osu.edu/cardinal-rules](http://go.osu.edu/cardinal-rules))



## Copyright for Instructional Materials

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.

## Creating an Environment Free from Harassment, Discrimination, and Sexual Misconduct

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](https://equity.osu.edu),
2. Call 614-247-5838 or TTY 614-688-8605,
3. Or Email [equity@osu.edu](mailto: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."

The Ohio State University affirms the importance and value of diversity of people and ideas. We believe in creating equitable research opportunities for all students and to providing programs and curricula that allow our students to understand critical societal challenges from diverse perspectives and aspire to use research to promote sustainable solutions for all. We are

committed to maintaining an inclusive community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among all members; and encourages each individual to strive to reach their own potential. The Ohio State University does not discriminate on the basis of age, ancestry, color, disability, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, race, religion, sex, gender, sexual orientation, pregnancy, protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment.

To learn more about diversity, equity, and inclusion and for opportunities to get involved, please visit:

- <https://odi.osu.edu/>
- <https://odi.osu.edu/racial-justice-resources>
- <https://odi.osu.edu/focus-on-racial-justice>
- <http://mcc.osu.edu/>

In addition, this course adheres to **The Principles of Community** adopted by the College of Food, Agricultural, and Environmental Sciences. These principles are located on the Carmen site for this course; and can also be found at <https://go.osu.edu/principlesofcommunity>. For additional information on Diversity, Equity, and Inclusion in CFAES, contact the CFAES Office for Diversity, Equity, and Inclusion (<https://equityandinclusion.cfaes.ohio-state.edu/>). If you have been a victim of or a witness to harassment or discrimination or a bias incident, you can report it online and anonymously (if you choose) at <https://equity.osu.edu/>.

## 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. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life Counseling and Consultation Services (CCS) by visiting [ccs.osu.edu](https://ccs.osu.edu) or calling (614) 292- 5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. 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 Suicide Prevention Hotline at 1-(800)-273-TALK or at [suicidepreventionlifeline.org](https://suicidepreventionlifeline.org)

For students in the College of Food, Agricultural, and Environmental Sciences, David Wirt, [wirt.9@osu.edu](mailto:wirt.9@osu.edu), is the CFAES embedded mental health counselor. He is available for new consultations and to establish routine care. To schedule with David, please call 614-292-5766. Students should mention their affiliation with CFAES when setting up a phone screening.

# Accessibility Accommodations for Students with Disabilities

## Requesting 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](http://slds.osu.edu)
- Email: [slds@osu.edu](mailto:slds@osu.edu)
- In person: [Baker Hall 098, 113 W. 12th Avenue](#)

The university strives to make all learning experiences as accessible as possible. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through the university's request process ([slds.osu.edu/covid-19-info/covid-related-accommodation-requests](http://slds.osu.edu/covid-19-info/covid-related-accommodation-requests)), managed by Student Life Disability Services. 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. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: [slds@osu.edu](mailto:slds@osu.edu); 614-292-3307; [slds.osu.edu](http://slds.osu.edu); 098 Baker Hall, 113 W. 12th

## 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 Schedule

Refer to the CarmenCanvas course for up-to-date due dates.

| Week starting      | Percentage of grade | Topics, Assignments, Due Dates   |
|--------------------|---------------------|--|
| 8/23               |                     | Welcome, Arthropod Characteristics and Importance                        |
| 8/29               | 4%                  | <b>Quiz 1 due 9/2</b> ; External Structure, Muscles and Locomotion       |
| 9/5                |                     | Circulatory/Respiratory, Digestive/Excretory                             |
| 9/12               | 4%                  | <b>Quiz 2 due 9/16</b> ; Reproduction, Nervous Systems, Mechanoreception |
| 9/19               | 5%                  | <b>Writing Assignment 1 due 9/23</b> ; Chemoreception and Photoreception |
| 9/26               | 4%                  | <b>Quiz 3 due 9/30</b> ; Taxonomy (Orders and Families)                  |
| 10/3               |                     | Migration, Behavior  |
| 10/10              | 5%                  | <b>Writing Assignment 2 due 10/14</b> ; Social Behavior, Termites        |
| 10/17              | 20%                 | <b>Exam 1 due 10/21</b> ; Wasps, Ants                                    |
| 10/24              |                     | Beekeeping and Honey Bee Biology   |
| 10/31              |                     | <b>Quiz 4 due 11/4</b> , Enemies of Insects, Insect Defense              |
| 11/7               |                     | Medical and Veterinary Entomology  |
| 11/14              | 4%                  | <b>Quiz 5 due 11/18</b> , Plant Feeders, Plant Defense                   |
| 11/21              | 5%                  | <b>Writing Assignment 3 due 11/25</b> , Pest Management                  |
| 11/28              |                     | Mutualisms   |
| 12/5               | 20%                 | Mutualisms, <b>Exam 2 due 12/7</b>                                       |
| <b>Finals week</b> | 25%                 | <b>Final Exam due 12/13</b>  |

| <b>Week Starting</b> | <b>Topic</b>                                       | <b>Readings in G&amp;C</b>                                   |
|----------------------|--|--|
| 8/23                 | Welcome, Arthropod Characteristics and Importance  | Chapter 1  |
| 8/29                 | External Structure, Muscles and Locomotion         | Chapter 2, Chapter 3 (3.1.1 -3.1.4)                          |
| 9/5                  | Circulatory/Respiratory, Digestive/Excretory       | Chapter 3 (3.4 & 3.5), Chapter 3 (3.6 – 3.7)                 |
| 9/12                 | Reproduction, Nervous Systems and Mechanoreception | Chapter 3 (3.8), Chapter 5 (5.8-5.11), Chapter 4 (4.1 – 4.2) |
| 9/19                 | Chemoreception and Photoreception                  | Chapter 4 (4.3 – 4.4)  |
| 9/26                 | Taxonomy (Orders and Families)                     | Chapter 7 (7.2) and Taxoboxes                                |
| 10/3                 | Migration, Behavior                                | Chapter 6 (6.7), Chapter 4 (4.5)                             |
| 10/10                | Social Behavior, Termites                          | Chapter 12 (12.1, 12.2.1, 12.4), Chapter 12 (12.2.4)         |
| 10/17                | Wasps, Ants  | Chapter 12 (12.2.2), Chapter 12 (12.2.3)                     |
| 10/24                | Beekeeping and Honey Bee Biology                   | Chapter 12 (12.2.2)  |
| 10/31                | Enemies of Insects, Insect Defense                 | No readings, Chapter 14                                      |
| 11/7                 | Medical and Veterinary Entomology                  | Chapter 15   |
| 11/14                | Plant Feeders, Plant Defense                       | Chapter 11 (11.1 – 11.4), No readings                        |
| 11/21                | Pest Management                                    | Chapter 16   |
| 11/28                | Mutualisms   | Chapter 11 (11.4)  |