ENT 202 Spring 2023

**The Insect Connection: Society, Globalization and Sustainability**

## Course Syllabus and Schedule

Welcome to ENT 202! Your enjoyment and performance in this class will be maximized if you read this entire syllabus so you don’t miss important details about assignment deadlines, assignment instructions, and expectations for the course. This syllabus is subject to change; changes will be issued in writing and uploaded to the class website on Canvas. Before contacting the instructor or the TAs with a question, please make sure to read the latest version of the syllabus to ensure that the answer was not already provided!

**Course Description:** ENT202 is a GN *Science* course that will use an interdisciplinary approach to look at the *biology* and the interplay between nature and society. Major themes of the course will be illustrated focusing on the world of *Insects* and the relationships between *Society and Insects.* Emphasis will be placed on critical analysis of both the costs and the benefits of human activities that impact natural systems.

**Course Learning Goals:**

1. Discuss, describe, and give examples of relevant ecological and evolutionary processes and / or phenomena.
2. Apply content knowledge and understanding in novel contexts and situations.
3. Recognize the implications of the two-way dynamic between human activities and insects.
4. Make predictions associated with likely impacts of human activities on natural systems, ecosystem services, and insect and human populations.
5. Conduct research of relevant literature and utilize empirical evidence to support claims.
6. Discuss, describe, and give examples of the two-way relationship between social issues and scientific discovery.
7. Communicate scientific knowledge to a diverse audience.

**Where and when:** The class is in person on Tuesdays & Thursdays, 9:05 to 10:20 am in Huck Life Sciences building room 100. Exams 1-3 will be conducted in person in the PSU Pollock testing center.

**Credit:** This is a 3-credit course.

**Instructor**

Dr. Etya Amsalem, Associate Professor of Entomology

Office location: 215 Huck Life Sciences Building

Email: eua6@psu.edu

Office phone: 814-863-7675

Office hours: Wednesdays, 12:15 - 1:15 pm

**Teaching assistants**

Please check who is your TA in the table below. Your TA is the address to all of the questions you may have about content and policy. Please use your PSU address when sending emails and give your TA 48 hours to get back to you. If you didn’t hear back within 48 hours, please forward your email to the instructor.

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| --- | --- | --- | --- |
| Name | Email | Office hours | Who is my TA? |
| Mr. Bijay Subedi | bsubedi@psu.edu | 520 ASI, Thu 3-4 pm | Students last name A-E |
| Mr. Jesse Evans | jre5226@psu.edu | 304 Rackley, Tue 10:30-11:30 am | Students last name F-K |
| Mr. Jorge Jaramillo Gonzalez | jlj5655@psu.edu | 544 ASI, Wed 2-3 pm | Students last name L-R |
| Ms. Sarah Spence | sks6958@psu.edu | 202 LSB, Wed 3:30-4:30 pm | Students last name S-Z |

### Course Policies

**Attendance:** Attendance is not required but is *strongly recommended.*  A portion of your grade will be determined by in-class exercises and quizzes, which cannot be made up. Also, some of the materials you will be asked on during exams will be from in-class lectures, and / or class discussions. Previous experience over the years shows that students who attend classes are more likely to enjoy the course and to succeed in it. **There is no need to email us if you missed a class**. Simply check the website for materials following the class and contact your TA if you have specific questions.

**Course resources.** Lecture notes, PDFs of primary literature, and additional information pertaining to the lectures, will be posted on the Canvas website. I will try to upload the slides prior to each class. I strongly recommend printing the slides and bringing them with you to class. Writing notes on the slides decreases significantly the amount of notes you take, allowing you more time for listening and participating. Canvas will be also used for announcements, accessing your grades, and communicating with your instructor and classmates.

**Course communication**. If you need to communicate with us, please use email. Please use your own Penn State email account to send and receive messages and to login to Canvas. Office hours are listed above. There is no need to let us know before coming to office hours – if there is anything you would like to discuss, simply come! Barring unusual circumstances, expect a reply within 24 hours during the week, and 48 hours over the weekend. **Please be aware that I do not check my emails between 5 pm to 8 am**. I will occasionally email members of the class. Please check your email regularly to be sure you get the information I send out. Each student is responsible for reading and following the instructions, guidelines, and schedules in this syllabus, on the course webpage and in class. Not having read the information will not constitute an excuse for missing deadlines, assignments, or other assessments. Please set your preference in Canvas so that you receive timely notifications of course announcements and other information. Questions about homework and course materials should first be sent to your TA. Please be aware that email is NOT an acceptable method by which to submit assignments, unless otherwise stated in the syllabus or in class.

**Log-In Policy.** Students are expected to log-in regularly to keep up-to-date with announcements, discussions, etc. The class will progress at a regular pace throughout the semester and there are speciﬁc due dates and times for assignments.

**Grading:** Your grade will be calculated on the basis of the total number of percentage points earned for each of the following categories:

In-classquizzes (best five) – 150 pts (15%)

Homework – 250 pts (25%)

Exam 1 - 250 pts (25%)

Exam 2 - 250 pts (25%)

Exam 3 – 100 pts (10%)

**Grading Scale:** Final grades will be assigned based upon the following percentages:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| A | < 100%  | to 93%  |
| A- | < 93%  | to 90%  |
| B+ | < 90%  | to 87%  |
| B | < 87%  | to 83%  |
| B- | < 83%  | to 80%  |
| C+ | < 80%  | to 77%  |
| C | < 77%  | to 70%  |
| D | < 70%  | to 60%  |
| F | < 60%  | to 0%  |

Throughout the semester, you will be able to view your grade on Canvas. This grade will be calculated based on your HWs, best 5 quizzes and exams. Any bonus points (e.g., extra credit) will not be reflected in the Canvas grade but will be added to your final grade.

**Quizzes:** about 10-15 pop-quizzes will be conducted throughout the semester. The quizzes will be conducted during class time without further notice, can be given anytime during class time and may contain 3-5 questions in a similar format to the questions given in the exams. The average score of the best five quizzes will account for a total of 15% of the grade. Quizzes cannot be made up, but you will have plenty of opportunities during the semester to take at least five. There is no need to let us know that you skipped a quiz. **You can use your notes or slides to answer quizzes, but you are expected to do the quiz alone and cannot talk or consult with your neighbors during the quiz**. Quizzes are a learning experience and can help you test your knowledge, reflect to me if some concepts were unclear, familiarize you with the type of questions I may ask in the exam, and boost your grade. Remember, I only consider the best five, so don’t be discouraged if your initial grades are not as expected, you will have many opportunities to improve during the semester.

# Homework Assignments: There are 10 homework assignments during this course. These assignments must be completed and submitted by the end of the prescribed day. The list of assignments, a link to the media associated with them and their due date are provided below. Homework assignments will be released a week before the due date. Late assignments will not be accepted. All homework assignments should be submitted as a WORD document via Canvas and account for a total of 25% of the total grade. Canvas will not let you submit a document of another format and will be locked by the end of the due date. Don’t wait for the last moment to submit your work. Every homework assignment will be graded by a single TA as listed below. This TA is not necessarily your TA! If you have questions about the assignment or about your grade, please contact this TA.

|  |  |  |  |
| --- | --- | --- | --- |
| **Due date** | **Available at** | **Assignment** | **TA** |
| Jan 17 | Jan 10 | **#1 Radiolab** **Podcast:** [**Yellow fluff and other stuff**](http://www.radiolab.org/story/91672-yellow-fluff-and-other-curious-encounters/) | Mr. Bijay Subedi |
| Jan 24 | Jan 17 | **#2 YouTube Video:** [**The Whole History of the Earth and Life**](https://www.youtube.com/watch?v=-hDpJv9IdpM) | Mr. Jesse Evans |
| Jan 31 | Jan 24 | **#3 Radiolab** **Podcast:** [**Inheritance**](http://www.radiolab.org/story/251876-inheritance/) | Mr. Jorge Jaramillo Gonzalez |
| Feb 9 | Feb 2 | **#4 Radiolab Podcast:** [**Damn bugs**](https://www.wnycstudios.org/podcasts/radiolab/episodes/damn-bugs) | Ms. Sarah Spence |
| Feb 16 | Feb 9 | **#5 Radiolab Podcast:** [**Animal minds**](http://www.radiolab.org/story/91701-animal-minds/) | Mr. Bijay Subedi |
| Feb 28 | Feb 21 | **#6 Ted Talk** [**The loves and lives of fireflies**](https://www.ted.com/talks/sara_lewis_the_loves_and_lies_of_fireflies?referrer=playlist-insects_are_awesome#t-815870) | Mr. Jesse Evans |
| Mar 16 | Mar 9 | **#7 Radiolab Podcast:** [**Glad somebody likes bugs…**](http://www.radiolab.org/story/91678-glad-somebody-likes-bugs/) | Mr. Jorge Jaramillo Gonzalez |
| Apr 6 | Mar 30 | **#8** [**Ted Talk: Marcel Dicke: Why not eat insects?**](https://www.ted.com/talks/marcel_dicke_why_not_eat_insects) | Ms. Sarah Spence |
| Apr 13 | Apr 6 | **#9 HW: Radiolab Podcast:** [**Parasites**](https://www.wnycstudios.org/podcasts/radiolab/episodes/91689-parasites) | Mr. Bijay Subedi |
| Apr 20 | Apr 13 | **#10 HW: Radiolab Podcast:** [**Poop Train**](https://www.wnycstudios.org/podcasts/radiolab/articles/poop-train) | Mr. Jesse Evans |

**NOTE #1:**  You are required to do all assignments. They must be completed by the due date as listed next to each assignment on the Canvas website. Due dates will only be extended for extenuating situations, such as the server being down for a significant period of time (all day or more). Emergencies such as sickness on the due date cannot be used as an excuse for not submitting homework since you have one week to complete the assignment and are expected not to postpone it to the last day. Do not leave these assignments until the last minute because you may not be able to log-in due to server demand, or the server may go down for a short time preventing you from finishing the assignment. These are not adequate excuses for missing an assignment.  Late homework will not be accepted and a score of 0 will be assigned. I strongly recommend completing the assignment on the day it is released.

**NOTE #2**: you must complete the homework alone and answer HW questions with your own words. You cannot quote sentences from the podcasts or videos and cannot have answers that are identical to another student in the class. If we receive fully or partially identical assignments, we will grade all assignments involved with 0. This is considered **plagiarism** (see more information below) and cases of plagiarism may be reported to the Office of Student Conduct.

**NOTE #3**: It is the student’s responsibility to make sure their assignment was submitted to Canvas on time and that they submitted the right document. Please double check that your work has been submitted by closing the browser and reopening the file. Make sure you didn’t submit a blank page, an empty assignment, or a corrupted file. Any of these will be graded with 0 if spotted by the TAs after the due date.

**Exams** There will be 3 exams spaced throughout the semester. Exam questions will be based on lecture material and homework assignments. Each exam will have a combination of multiple-choice, fill in the blank, true/false, and short answer questions. The first two exams are worth 25% of the total grade (each) while the last exam accounts for 10% of the total grade. The exams are not cumulative. **There is no final exam during finals week.** All exams will be conducted IN PERSON in the **Pollock testing center** (http://testing.psu.edu/). A week before the exam you will receive an email to your **PSU email address** asking you to sign in for your test. The test lasts 60 min and can be conducted anytime between 8 am and 10 pm during the exam day.

**Make up** requests for an exam will only be granted if a sound reason with written documentation is provided, (e.g. letter from the Deans Office). Formally accepted excuses are one of the followings: illness, injury, military service, family emergency, religious observance, athletic contests, employment, and graduate school interviews. Unless the reason is urgent (e.g., car accident in the morning of the exam, please stay safe!), students should ask for permission to miss an exam at least 24 hours before the exam for reasons associated with illness, and at least 7 days prior to the exam for pre-scheduled events (job interview or sporting event). Requests for makeup exams should be sent directly to Dr. Amsalem. Any make-up exam that is agreed to must be taken within three days of the original test date and it is the responsibility of the student to schedule it. Make up exams may be given in the testing center but can also be in an oral format or in person.

**Rebuttals.** If you think you were graded unfairly (or erroneously) on an assignment or exam, please turn in a written explanation (rebuttal) with your graded assignment/exam to the instructor within two weeks. The instructor will write a response and return it to you. You may set up an appointment if you disagree with the resolution.

**Extra credit.** If interested in improving your grade, you may submit an additional assignment. The last day to submit the assignment will be Apr 28. You can submit it any time before the deadline, and I strongly recommend doing it sometimes during the semester and not close to the due date. The assignment can receive a score of up to 40 points that will be added to the final grade. The TAs responsible for the extra credit are Ms. Sarah Spence and Mr. Jorge Jaramillo Gonzalez.

**Instructions**: First you need to find an article in the popular press about insects. You need to cite the article, write a one-page summary of it and provide a one-page critique about the information provided in the article. To do so, you need to refer to the material from the lectures and explain if you think the author has presented the science accurately or not.  The work should be single spaced and with a font size no larger than 12. The assignment should be submitted to Canvas. Examples of places to look: The New York Times (Tuesday is Science News Day), Centre Daily Times, Time, Newsweek, or National Geographic. Other sources are acceptable but avoid strange websites - try for more mainstream journalism.

Extra credit assignment will be graded as follows:
10 pts - proper summary (in your own words) and a legit source
15 pts - a through critique, at least 5 different arguments about the content, each one of them needs to be developed thoroughly. If you can’t find at least 5 arguments to say about the article, you should look for another article! Each argument will be scored 3 points
10 pts - references to the material learned in class are provided for each argument (2 points each)
5 pts - the length of the assignment is 2 pages, is single spaced and the font size is 12 or smaller

**Be courteous.** Every student is expected to contribute to a positive, distraction-free learning environment. Laptops and other electronic devices may be used for taking notes during the lecture, but please refrain from activities not directly related to the course. Please do not talk while the instructor or another student is talking to the class. In general, please be respectful of other students and the educational process.

**Penn State policies and resources**

**Accessibility Information.** Accessibility statement for [Canvas](https://community.canvaslms.com/docs/DOC-2061).

**Netiquette.** The term "Netiquette" refers to the etiquette guidelines for electronic communications, such as e-mail and discussion postings. Netiquette covers not only rules to maintain civility in discussions, but also special guidelines unique to the electronic nature of messages. Please review Virginia Shea's "[The Core Rules of Netiquette](http://www.albion.com/netiquette/corerules.html)" for general guidelines that should be followed when communicating in this course. When you send an email to the professor or the TAs, please refer to them in an appropriate way (Ms Spence, Mr Dean, Dr. Amsalem). If you are not sure how to approach someone, simply ask!

**Support Services.** As a Penn State student, you have access to a variety of services and resources, including advising, tutoring, library services, career services, and more. Please visit the [Student Support Resources](https://remotelearning.psu.edu/student-support/) page for more information.

If you experience technology problems of any kind in Canvas, please select the Help icon and select "Report a Canvas Problem," "Chat with Support," or "Call Support." It is in your own best interest to be as speciﬁc as you possibly can. Vague descriptions of a problem only delay assistance. Try to include information such as: the speciﬁc course page, quiz question, etc. you were on; what you attempted to do when that failed; the exact language of any error message displayed on your screen; the date and time when your problem occurred; and any other pertinent information (does the problem happen consistently and always in the same way, etc.).

**Online Students Use of the Library.** As Penn State students, you have access to many of the materials that the library offers to students. Please visit the [University Libraries](https://libraries.psu.edu/) website as it provides services including tutorials, peer reference consultants, an ask-a-librarian chat service, and data support to students from all campuses.

**Educational Equity Statement.** Penn State takes great pride to foster a diverse and inclusive environment for students, faculty, and staff. Acts of intolerance, discrimination, or harassment due to age, ancestry, color, disability, gender, gender identity, national origin, race, religious belief, sexual orientation, or veteran status are not tolerated and can be reported through Educational Equity at the [Report Bias](http://equity.psu.edu/reportbias/) webpage.

**Copyright Notice.** All course materials students receive or to which students have online access are protected by copyright laws. Students may use course materials and make copies for their own use as needed, but unauthorized distribution and/or uploading of materials without the instructor's express permission is strictly prohibited. University Policy AD 40, the University Policy Recording of Classroom Activities and Note Taking Services addresses this issue. Students who engage in the unauthorized distribution of copyrighted materials may be held in violation of the University's Code of Conduct, and/or liable under Federal and State laws.

**Counseling and Psychological Services (CAPS).** Many students at Penn State face personal challenges or have psychological needs that may interfere with interfere with their academic progress, social development, or emotional well-being. The university offers a variety of conﬁdential services to help you through difﬁcult times, including individual and group counseling, crisis intervention, consultations, online chats, and mental health screenings. These services are provided by staff who welcome all students and embrace a philosophy respectful of clients' cultural and religious backgrounds, and sensitive to differences in race, ability, gender identity and sexual orientation.

Counseling and Psychological Services (CAPS) (814) 863-0395
Penn State Crisis Line (24 hours/7 days/week) (877) 229-6400
Crisis Text Line (24 hours/7 days/week) Text LIONS to 741741

[Mental Health Services](https://student.worldcampus.psu.edu/student-services/mental-health-services)

**Accommodations for Persons with Disabilities.** Penn State welcomes students with disabilities into the University's educational programs. Every Penn State campus has an ofﬁce for students with disabilities. The Student Disability Resources Web site provides [contact information for every Penn State campus](http://equity.psu.edu/student-disability-resources/campus-disability-coordinators). For further information, please visit the [Student Disability Resources Web site](http://equity.psu.edu/student-disability-resources).In order to receive consideration for reasonable accommodations, you must contact the appropriate disability services ofﬁce at the campus where you are ofﬁcially enrolled, [participate in an intake interview, and provide documentation](http://equity.psu.edu/student-disability-resources/applying-for-services). If the documentation supports your request for reasonable accommodations, your [campus's disability services ofﬁce](http://equity.psu.edu/student-disability-resources/campus-disability-coordinators) will provide you with an accommodation letter. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. You must follow this process for every semester that you request accommodations.**Privacy Policies.** For information about Penn State's privacy statement and what it encompasses, please read their policy concerning [web privacy](https://www.psu.edu/web-privacy-statement). Visit Penn State's [Family Educational Rights and Privacy Act](https://www.registrar.psu.edu/confidentiality/guidelines-faculty-staff/index.cfm) (FERPA) page for information regarding its rules on governing the privacy of student educational records.

**Accommodations for Military Personnel.** Veterans and currently serving military personnel and/or spouses with unique circumstances (e.g., upcoming deployments, drill/duty requirements, disabilities, VA appointments, etc.) are welcome and encouraged to communicate these, in advance if possible, to the instructor in the case that special arrangements need to be made.

**Use of Trade Names.** Where trade names are used, no discrimination is intended and no endorsement by the World Campus, Outreach and Cooperative Extension, the College of Agricultural Sciences, or The Pennsylvania State University is implied.

**Subject to Change Statement.** Please note that this Course Syllabus is subject to change. Students are responsible for abiding by such changes.

**Academic Integrity Statement.** Academic integrity is a foundation for building integrity in all aspects of our adult lives. Academic integrity is about more than the words "don't cheat", though that is certainly part of it. Here are some reasons why academic integrity is so important

* Cheating in school leads to more cheating and lying later in life, in all contexts.
* Ethical decision-making takes a great deal of practice, and college is the best time to practice.
* Cheating is contagious.
* You’ll be happier and more committed if our class is cheat-free.
* You'll learn more.

Examples: Here are some specific examples (though not a complete list) to help clarify how to honestly approach this class.

Honest behavior: Talking about course concepts with others is a great way to help each other learn but be sure to write up your assignments on your own. Be sure you can explain everything in your own words. All work submitted by you should be an honest reflection of what you yourself personally know and understand without assistance.

Dishonest behavior: Any action whereby a student fails to do all the assigned work on their own, including, but not limited to: submitting the written work of anyone else, getting answers from any other source other than your own thinking or course content, using unauthorized sources of information for any assignments or tests, or misrepresenting any information to the instructor.

**Written assignments**: Written work that you submit for this class may be analyzed with plagiarism detection software, so be sure that any writing you do for this course, no matter how short or long, is completely in your own words and cite your sources of information. No quoted text (using someone else’s writing word for word) from a source may be used in your written assignments. Plagiarism is one of the most frequently committed violations of academic integrity in college classes.

**Warning:** Ignorance is not a valid defense for plagiarism. Educate yourself about what constitutes plagiarism, so you don't get burned. See <http://tlt.its.psu.edu/plagiarism>.

From Penn State’s website: “Academic integrity includes a commitment not to engage in or tolerate acts of falsification, plagiarism, misrepresentation or deception. Such acts of dishonesty violate the fundamental ethical principles of the University community and compromise the worth of work completed by others.” Code of student conduct <http://studentaffairs.psu.edu/conduct/codeofconduct> . Academic Integrity Guidelines for the College of Agricultural Sciences <http://agsci.psu.edu/students/resources/academic-integrity>.

**Review System -** Pennsylvania State University takes seriously the opinion of students in the evaluation of the effectiveness of instruction and has implemented the review process to gather student feedback. This course utilizes the “Student Rating of Teaching Effectiveness (SRTE)” system. You notified sometime during the last two weeks of class asking you to fill out a form at your convenience. We hope that you will be willing to give us your frank and constructive feedback so that we may instruct students even better in the future.

**Course Schedule – ENT 202 – Spring 2023**

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|  | **Date** | **Lecture and Exam Schedule** |
| The materials of life | Jan 10 | Introduction: What to expect? Syllabus, Introduction to Insects |
| Jan 12 | TA introduction, Introduction to Science |
| Jan 17 | Matter and Energy, submit HW1 |
| Jan 19 | Life and Death on Earth |
| Jan 24 | Evolution, submit HW2 |
| Jan 26 | DNA, RNA, Genes and Cells |
| Jan 31 | Guest talk: Plant life and animal lifecycles, Dr. Shiran Benzeev, submit HW3 |
| Feb 2 | Review for Exam 1 (for material covered between Jan 10 to Jan 31) |
| Feb 7 | Exam 1 – testing center |
| Insects | Feb 9 | Insect classification, morphology, and development, submit HW4 |
| Feb 14 | Name the bug: The insect orders A |
| Feb 16 | Name the bug: The insect orders B, submit HW5 |
| Feb 21 | Name the bug: The insect orders C |
| Feb 23 | Insect behavior  |
| Fen 28 | Insect movement and orientation, submit HW6 |
| Mar 2 | Insect diapause and migration |
| Mar 7 | Spring break – no classes  |
| Mar 9 | Spring break – no classes |
| Mar 14 | Insect reproduction |
| Mar 16 | Insect communication, submit HW7 |
| Mar 21 | Insects and human |
| Mar 23 | Review for Exam 2 (for material covered between Feb 9 to Mar 16) |
| Mar 28 | Exam 2 – testing center |
| Insect-human interactions | Mar 30 | Agriculture and pest control |
| Apr 4 | Biological control  |
| Apr 6 | Edible insects, submit HW8 |
| Apr 11 | Pollination |
| Apr 13 | Guest talk: Insects and disease, Mr. Jesse Evans, submit HW9 |
| Apr 18 | Insects as research models and Forensic Entomology |
| Apr 20 | Climate change, submit HW10 |
| Apr 25 | Review for Exam 3 |
| Apr 27 | Exam 3 (for material covered between March 21 to Apr 20) |