



Bugs and People

ENY 1001



Spring 2023

Instructor: Dr. Rebecca Baldwin

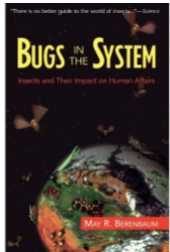
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Office Hours:

Monday and Wednesday 3:30-4:30 Steinmetz Hall Room 2208 or by Zoom (link on Canvas Home Page).



Required Text :



Berenbaum, May R. 1995. Bugs in the System: insects and their impact on human affairs. Helix Books. ISBN Number 0-201-40824-4 (paperback – cost ~\$16.00, ~\$10 ebook.) *Be sure you have access to the text so you may complete your ungraded study guides.*

TAs–

- Jamie Beach – jamiabeach@ufl.edu
- Christian Wilder – cwilder2@ufl.edu

General Education Statements

International Scholars Program (ISP)- This course fulfills one of the curriculum requirements of the *International Scholars Program*. Learn more about how you can obtain a graduation medallion and diploma <https://internationalcenter.ufl.edu/student-opportunities/international-scholars-program> . During this course, we will discuss how insects have impacted human culture from ancient civilizations to modern times. We will also have the opportunity to sample insect cuisine.

Biology (B) General Education (GE) credits

Biological science courses provide instruction in the basic concepts, theories and terms of the scientific method in the context of the life sciences. Courses focus on major scientific developments and their impacts on society, science and the environment, and the relevant processes that govern biological systems. Students will formulate empirically-testable hypotheses derived from the study of living things, apply logical reasoning skills through scientific criticism and argument, and apply techniques of discovery and critical thinking to evaluate outcomes of experiments.

International (N) General Education (GE) credits

International courses promote the development of students’ global and intercultural awareness. Students examine the cultural, economic, geographic, historical, political, and/or social experiences and processes that characterize the contemporary world, and thereby comprehend the trends, challenges, and opportunities that affect communities around the world. Students analyze and reflect on the ways in which cultural, economic, political, and/or social systems and beliefs mediate their own and other people’s understanding of an increasingly connected world.

Note: A grade of C or better is required to receive GE credit.

Course Description

Introduction for lower-division students who want to learn popular information about insects and associated organisms. (B, N, ISP)

Course Objectives

1. To categorize a “bug” using taxonomy approved by the International Code of Zoological Nomenclature.
2. To recognize the components in the process of science and formulate a hypothesis.
3. To communicate the impacts both pest and beneficial insects play in human history and culture including examples from current news events, government policies, art, music, folklore, film and literature.
4. To evaluate how “bugs” impact society and global quality of life by competing with people for food, shelter, clothing, and health.
5. To discuss global neglected diseases transmitted by arthropods.
6. To comprehend the beneficial nature and how, due to their biology, “bugs” are important research models.
7. To recognize biological processes, especially the unique growth and reproduction strategies of arthropods.
8. To compile global uses of humans use of insects for nutrition and evaluate how humans use insect products in everyday items.
9. To observe “bug” diversity in various ecosystems and identify trophic interactions.

Graded Projects and Exams

Exams and Online Quizzes:

- There will be **three exams** scheduled during class time.
- Each exam will consist of 50 multiple-choice questions.
- All exams are closed book.
- *Exam Make-Up Policy:* If you are ill or have extenuating circumstances, you must contact Dr. Baldwin **prior to** the scheduled exam and must provide appropriate written documentation to schedule a make-up examination.
- There will be several online quizzes based on modules in Canvas. These quizzes are worth 10-20 points each.
- You may participate in optional extra credit opportunities throughout the semester. These will be announced during class.

Creative Project: Bugge Faire:

During the semester, each student will collaborate with a group to research a “bug.” (Most arthropods we study will be insects, but other arthropods are acceptable.) Each group will design a model of that organism, create a presentation or science-fair style poster of biological facts, and give an eight-minute presentation during the **Bugge Faire** as the final project. The creative model must closely resemble the organism, and the presentation must contain a photo of the organism that is modeled, as well as biological facts about the organism. The information should be in bulleted lists of talking points and should not be written out in complete sentences to be read. Presentations will be made to a group of student and faculty judges. Each presentation should be ~8 minutes in length and should include the taxonomy of the “bug”, where it is found geographically and ecologically, unique characteristics, and other biological facts (pest or beneficial, predator or prey, etc.). View this as a documentary or commercial for your “bug.” You only have a few minutes, so wow the judges with your knowledge. Each member of your group must present, and groups are encouraged to be creative with their dress, background music, lightening, model (food may be shared with the class) etc. *Group members that do not participate in the preparation or presentation will receive a 0 on the project.* Each member of the collaborative team will be peer evaluated, so communication with your group is important. This is a chance for you to show your creativity, communication skills, and teamwork, as well as your entomological knowledge. Presentations will take place during class time, and the class and judges will ask you questions at the conclusion of your presentation. Remember to be creative with your presentation. Students have created Minecraft boards, have created Pokemon type characters, have written poems and songs to set their presentations apart. Some students do dress in costume and have theme music to accompany their presentation. If your group has questions or needs ideas, please ask. Oh, each group will select a team leader to ensure quality control, schedule a presentation time, and upload the final presentation or photo of the project board to Canvas.

Bugge Faire Creative Project Grading Rubric

Criteria	Ratings			Points
Presentation length is appropriate (~8 minutes). Group worked well together and project flowed well.	Presentation was rehearsed and flowed well.	10	Too short or long Presentation disjointed and not rehearsed..	5
Sildes/Video/Poster are accurate and professional in appearance. Information is accurate and complete. References are included and photos include source.	Information is complete and is accurate. Poster/slides include(s) bulleted talking points, and information about the model included.	10	Not all information is presented and some information is inaccurate. Poster is lacking in detail.	5
Questions are answered accurately.	All questions are answered appropriately.	10	Some questions not answered, or misinformation is given.	5
Model is included and is biologically accurate or explanation of accuracy is given. (Food should be shared and plates provided)	Model accurately represents the organism and is explained during presentation.	10	Model is missing important features or misrepresents the organism.	5
Overall appeal and creativity of presentation.	Excellent - Good	10	Fair -Poor	5
Team Name and Individual Responsibilities Posted by Due Date	Yes	5	No	0

Extra Credit Assignments (5-10 points each): *There are various optional activities to enhance your experience with "bugs" offered each semester. These experiences will give you a chance to have some hands-on and up-close interactions with bugs and the damage they cause.*

Noteworthy Class Information:

- Abbreviated notes from the lecture material will be posted to Canvas.
- You are expected to attend all class meetings. If you choose to miss class, it is your responsibility to discover missed information from classmates. Several class periods will be set aside for group work on the Bugge Faire project or for online modules with quizzes.
- You will be responsible for assigned readings from Bugs in the System and materials presented during lecture. Your exams will be composed from all these sources; thus, you will need to read and comprehend text information as well as take notes during slides, videos and presentations.

Grading: There are a total of 400 possible points (excluding extra credit). Grades will be posted in Canvas. Please visit <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/> for the UF policy on grading.

If you have a disability, please register it with the DRC <https://disability.ufl.edu> and schedule a meeting with me to discuss accomodations within the first two weeks of class to ensure the appropriate accommodations.

Your grade in *Bugs and People* will be computed as follows:

Graded Assignment	Points	%
Syllabus Quiz	5	1
Bugge Faire Team Name and Responsibilities	5	1
Taxonomy/Nomenclature (ICZN) Review	10	2.5
Exam 1	100	25
Exam 2	100	25
Exam 3	100	25








Group Project - Bugge Faire	50	12.5
Insects in Music and Mythology	15	4
Process of Science: Research Paper Review Mexican Jumping Bean Locomotion	15	4
In-Class Activities <ul style="list-style-type: none"> Buggy Phrases Historical Global Insect Video Reviews 		
Extra Credit <ul style="list-style-type: none"> Strange and Unusual Bug (UF Tradition) Insect Song/Short Story/Poem (Group) Museum Scavenger Hunt 	--	
TOTAL	400	100


FINAL GRADING Scale: Percentage (0.5 and above will round up)	
90-100	A
80-89	B
70-79	C
60-69	D
0-59	E

If you must miss a class meeting time, you will need to communicate with your group to get notes from what you may have missed.

ENY 1001 Class Schedule (May be adjusted as needed)

Date	Day	Lecture Topic and Activities	Reading/ Quiz
1/9	Monday	<p>Course Introduction: How do “bugs” fit into human culture?</p> <ul style="list-style-type: none"> TA Introductions, Syllabus and Class Overview, Buggy Phrases <p>Read Preface – influence in art, literature, war, film, technology, agriculture, and human and animal health.</p> <p>Discussion Questions</p> <ul style="list-style-type: none"> What global issues are there involving insects? Have you heard of any insects in the recent news? What would you like to learn in this class? <ul style="list-style-type: none"> Meet others in class & Discuss Bugge Faire Group Projects Video: Life in the Undergrowth – A Miniature World (3:02) https://www.youtube.com/watch?v=kIO4W8eI7Fk 	<p>Syllabus (Canvas)</p> <p><i>Complete Syllabus Quiz</i></p> <p>Preface</p>
1/11	Wednesday	 <p>Invitation to Entomology Club meeting at 4:30 room 2218 Steinmetz Hall. (Bus 118 or park there)</p> <p>What are Insects?</p> <ul style="list-style-type: none"> Identify five arthropod classes Learn fundamental classification (Taxonomy /International Code) Influence of Aristotle (Greek), Pliny the Elder (Italian), Bartholomaeus Angilicus (French), and Linnaeus (Swedish) <p>What external structures make insects different from other animals?</p> <ol style="list-style-type: none"> Video: Life in the Undergrowth – A Miniature World Invasion of Land (26 min = total ~13:20 each) <ul style="list-style-type: none"> Part 1 - https://www.youtube.com/watch?v=bR5IUVTfQbl Part 2 - https://www.youtube.com/watch?v=6A08M3GI7M8 	<p>Chapter 1</p> <p>Answer study guide questions.</p>
1/13	Friday	<p>What is a “Bug” and How Bugs Grow</p> <ul style="list-style-type: none"> Ideas of Darwin, Wallace and Malthus Insect metamorphosis and reproduction <p>Determine where these arthropods can be found (global and locally)</p> <ul style="list-style-type: none"> Live Arthropods – Can you handle it? (Observation) <ul style="list-style-type: none"> View the differences between arthropods of the world Have the opportunity to view live specimens : <ul style="list-style-type: none"> Cockroaches from Madagascar Tardigrades from Central and South America Scorpions from Asia Native beetle and arachnid species 	<p>Live arthropod show and tell – Invite your family and friends.</p> 

1/16	Monday	HOLIDAY	
1/18	Wednesday	 <p>No class meeting – What is your favorite insect? Research 3 amazing insects and find three specific ones you would like to present to your peers on Friday. What is it (Dragonfly, Fly, Grasshopper, Beetle, Wasp, Bug, Butterfly, Wasp, Bee, Ant, Lacewing, Antlion, Caddisfly, Stonefly, Scorpionfly, Thrips, Aphids, Cicada, Katydid, etc.)? Where does it live? How does it impact people? Could it relate to your major? Why do you think it is amazing? Be prepared to tell others Friday.</p>	<p>Chapter 2</p> <p>Answer study guide questions.</p> <p>Post to Canvas</p>
1/20	Friday	<p>Activity –Russian Stop Action Animation 1912 -Video by by Vladislav Starevich – Russian videographer - The Cameraman’s Revenge –(13 min) https://www.youtube.com/watch?v=U424m8utJnA</p> <p>Discussion Questions</p> <ul style="list-style-type: none"> • How was humor portrayed in this film? • What was happening in the world when these films were made? • Why were these films so valued by the Russian people and people worldwide? <p>Activity – Group Formation for Bugge Faire Project Four individuals in a group. Share favorite insects.</p> <p>Please Do NOT miss this class! It is important that you are in a group for projects</p>	<p>Work with your TA to add group to Canvas, and select group leader.</p>
1/23	Monday	<p>Lecture continued</p> <p>Discussion Questions (not graded)</p> <ol style="list-style-type: none"> 1. What adaptations did arthropods need to survive on land? Make a list of at least three adaptations and their function. 2. What is an arthropod? Make a list of three arthropods, by common name, featured in the BBC Video Life in the Undergrowth. <p>Discuss metamorphosis and Biological Processes</p>	
1/25	Wednesday	Lecture continued	
1/27	Friday (Jamie and Christian)	<p>Global Diversity of Arthropoda (Jamie and Christian will record extra credit during class)</p> <p>Looking Good and Sounding Sweet –Bizarre Bugs (Insect Adaptations) EXTRA CREDIT</p> <p>**If you take a photo of you and your bug in a UF Tradition, you can double your extra credit and receive 10 points instead of 5. “Katch up” at the French Fries with your group and take a group photo if you like.</p> 	<p>Extra Credit Activity: Bring a bug and explain why it is strange or unusual. Put your name and description of insect on an index card. (Catch and release)**</p> <p>Chapter 3</p>  <p>http://entnemdept.ifas.ufl.edu</p>
1/30	Monday	<p>Discussion of Insect Orders - International Code of Zoological Nomenclature (ICZN)</p> <p>Overview of Taxonomy and Common Insect Orders</p> <p>Ametabola, Hemimetabola , Holometabola - Greek meaning of the names</p> <ul style="list-style-type: none"> • Define common insect orders and their characteristics • Explain mouth, leg, and wing adaptations <p>(Tip: Ask your TAs about how to collect and observe insects.</p>	<p>Appendix - Answer study guide questions</p>
2/1	Wednesday	Insect Orders continued	
2/3	Friday	Complete Chapters 1-3 and Appendix	<p>Online Taxonomy Review Quiz</p>
2/6	Monday	EXAM1 - (Chapters 1,2,3 and the Appendix)	EXAM 1
2/8	Wednesday	Insect Sociality –	Chapter 4

		<p>Discussion</p> <ul style="list-style-type: none"> Define social structure in insects Insects that make food: Beekeeping (honey and pollination services) Ancient use of bees as biological warfare (Persia) (mad bees), cosmetics (Italy), medicine - (Italy and Greece), and religious uses (Greece and Rome) <p>African Bees via Brazil</p>	Worksheet available in class
2/10	Friday	<p>Video – Global Insects – BBC Life – Termites in Australia, Red Bugs in Japan, Honey Bees in North America, Monarch Migration to Mexico</p> <p>Discuss three characteristics of eusociality</p>	Worksheet Review Chapter 5
2/13	Monday	<p>Buzz Pollination Demonstration</p> <p>Video and Discussion - The Language of the Bee – Hypothesis testing to discover the meaning of the waggle dance – German scientist, Karl von Frisch (Noble Prize in Medicine 1973)</p>	Honey tasting
2/15	Wednesday	<p>Video and Discussion - The Language of the Bee – Hypothesis testing to discover the meaning of the waggle dance – German scientist, Karl von Frisch (Noble Prize in Medicine 1973)</p>	
2/17	Friday (Dr. B iDig TRIO)	<p>Meet with your group to discuss Bugge Faire Presentations and individual responsibilities</p>	Upload title for your Bugge Faire project and responsibilities of each member.
2/20	Monday	 <p>Entomophagy – Let’s eat some insects! (Location will be announced in class.)</p> <p>Entomophagy worldwide</p> <ul style="list-style-type: none"> China, Cambodia, Australia, Peru, Mexico, Africa, US Sample some insect cuisine <p>Insects as Food and Medicine (Ancients, Asia, Americas)</p> <p>Assess the potential of micro-livestock as a protein source for a growing population (calculate the efficiency of conversion of ingested food (ECI))</p> <ul style="list-style-type: none"> Review of ECI and Insects as food <p>FDA regulation</p>	Chapter 6
2/22	Wednesday (Dr. B SWFPMC)	<p>No class meeting in Turlington– feel free to work on your Bugge Faire Project during class time.</p> <p>Online Insects in Mythology</p> <ul style="list-style-type: none"> Insects in Greek, Egyptian, Italian and Native American cultures Other thoughts from your readings. <ul style="list-style-type: none"> Explore ancient worship of insects (Egypt, Greece, China, Americas) List and discuss insects mentioned in ancient texts <p>Discuss creation story of insects (Genesis 1:2-25)</p>	Online Mythology Quiz
2/24	Friday (Jamie)	<p>Bugs that Give you Pleasure Discussion– Apitherapy and Sericulture</p> <ul style="list-style-type: none"> Bee products and their global uses (Orthodox religion, health) <ul style="list-style-type: none"> Bee Venom LD₅₀ = (2.8 mg/kg) 1140 for Adult of 132lbs <p>Silk production in China – Domesticated Lepidopteran larvae</p>	
2/27	Monday (Dr. B NFPMC)	<p>No class meeting in Turlington</p> <p>Meet with Group to Explore the Florida Museum of Natural History and NATL – Bring your UF ID for free admission to the Butterfly Rainforest.</p> <p>Work with Bugge Faire Group – Practice Presentations</p>	Optional Museum Extra Credit
3/1	Wednesday	<p>Bugs that Give you Pleasure</p>	
3/3	Friday	<p>Insects in Song – Optional Extra Credit</p> <p>With a group and using the notes from this class, present a song, short story, or poem to the class. There needs to be some interaction with sound effects or audience participation and should have some accompaniment.</p>	Optional Extra Credit
3/6	Monday	Lecture continued	
3/8	Wednesday	EXAM 2	EXAM 2 – Ch 4,5,6
3/10	Friday (Jamie and Christian)	<p>The Process of Science – Mexican Jumping Beans</p> <ul style="list-style-type: none"> Definitions, case studies Hypothesis testing <p>Scientific paper review - Read research article –Locomotion of The Mexican Jumping Bean, complete Canvas Quiz, and create hypothesis based on observations</p>	Online Quiz

3/13-17		SPRING BREAK	
3/20	Monday	<p>Introduction to Arthropods of Medical and Veterinary Importance <i>Insects in the News – Begin class with discussion of current insect events worldwide</i></p> <p>Bugs that Eat Blood and Spread Disease</p> <ul style="list-style-type: none"> • View historical monuments dedicated to insects (Florida) • Detail the importance of insects in war (Russia and France) <p>Discuss how insects have impacted US history (Panama canal, Philadelphia, Modern sanitation, and the Louisiana Purchase)</p>	<p>Chapter 7</p> <p>Worksheet</p> <p>Caution: Graphic video and lecture on diseases</p>
3/22	Wednesday	<p>Worldwide Neglected Diseases (CDC and WHO Video) <i>Caution: Graphic video and lecture on arthropod vectored diseases from around the world</i></p> <p>Insects as Medicine – Historical</p> <ul style="list-style-type: none"> • Medicine of Egypt – The Ebers Papyrus • Medicine of Rome and Europe – The Doctrine of Signatures (Middle Ages) • Insects for Health in Germany - 1699 Insect • France 1772 – Marquis de Sade – Cantharidin • US Civil War to Modern day medical and vet practices – <ul style="list-style-type: none"> ○ Cantharidin and maggot therapy ○ Video – TLC – Maggot Therapy in Europe <p>Identify Lice, Mosquitoes, Ticks, Fleas, Mites, Kissing Bugs</p>	
3/24	Friday	<p>Arthropod Vectored Human Diseases</p> <p>Bug Phobias and Delusions: Psychological Impact of Insects and Spiders</p> <ul style="list-style-type: none"> • Discuss symptoms of entomophobia and DP • Compare symptoms to those of chemical sensitivities • Contrast illusion and delusion 	
3/27	Monday	<p>IPM, Pesticides and Health</p> <p>A Fly in the Ointment: Global insights on Insects as medicine</p>	Read Chapters 10-11
3/29	Wednesday	The most dangerous animals in the world including the lesser known arthropod vectors of disease. (Dr. Phil Koehler – Navy Entomologist, UF Endowed Professor Emeritus)	GUEST Dr. Koehler
3/31	Friday	<p>Humans versus Insects - What can you do to make a difference in the world? (guest lecture notes are not available in Canvas)</p> <p>Caution: Graphic video and lecture on diseases</p>	
4/3	Monday	IPM Continued	
4/5	Wednesday	IPM Continued	
4/7	Friday (Christian)	<p>The Insect Perspective</p> <p>Forensic Science and Entomology</p> <ul style="list-style-type: none"> • Define forensic entomology and the types. • Discuss stages of decay and the associated insects • Discuss the history of the science <p>Insects and the Law (Scotland, England and America)</p>	Forensic Entomology
4/10	Monday	Forensic Entomology Continued	
4/12	Wednesday	Continue Lectures or Practice for Bugge Faire	
4/14	Friday	<p>ANT Observation</p> <p>Activity – Ant Foraging Observation and Pre-Baiting (Work with your group.)</p> <ul style="list-style-type: none"> • Predation, Parasitoids, Biological Control, Defenses, Plagues (Egypt) • Insect Communication <p>Insect Defenses</p>	
4/17	Monday	BUGGE FAIRE (3 groups)	Group Presentations
4/19	Wednesday	BUGGE FAIRE (3 groups)	Group Presentations
4/21	Friday	BUGGE FAIRE (3 groups)	Group Presentations
4/24	Monday	BUGGE FAIRE (3 groups)	Group Presentations
4/26	Wednesday	Exam 3	Exam 3

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| | <ul style="list-style-type: none"> • Complete class evaluations online. <p><i>If 75% of the class completes the evaluation before exam 3, group extra credit awards will be offered at the Bugge Faire. Evaluations are in Canvas.</i></p> | |
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If you do not sign up for, do not participate, or miss the Bugge Faire, you will receive a 0 on the project

REMINDER: Check Canvas on a regular basis for changes to the schedule, important announcements and posted grades.

E-mail Protocol:

- Please check the syllabus for an answer to your question before sending an e-mail. This is much appreciated.
- **E-Mail Format:** (Gatorlink e-mail must be used.)
This is a large class, so please follow this format for e-mails to Dr. Baldwin. If this format isn't followed, your message may not receive a reply.
- **Subject line:** "ENY 1001"
- **Body of the Message:** Please write in standard plain text. Always include your name and class number This helps to keep the messages organized so they can be answered in a timely manner. If you have not received a response in 48 hours, please re-send your message.
- Please copy your TA on the email.

International (N) General Education (GE) credits

International courses promote the development of students' global and intercultural awareness. Students examine the cultural, economic, geographic, historical, political, and/or social experiences and processes that characterize the contemporary world, and thereby comprehend the trends, challenges, and opportunities that affect communities around the world. Students analyze and reflect on the ways in which cultural, economic, political, and/or social systems and beliefs mediate their own and other people's understanding of an increasingly connected world.

GE Student Learning Outcomes (SLOs)

- Identify, describe, and explain the historical, cultural, economic, political, and/or social experiences and processes that characterize the contemporary world.
- Analyze and reflect on the ways in which cultural, economic, political, and/or social systems and beliefs mediate understandings of an increasingly connected contemporary world.
- Identify, describe, and explain the basic concepts, theories and terminology of natural science and the scientific method; the major scientific discoveries and the impacts on society and the environment; and the relevant processes that govern biological and physical systems.
- Formulate empirically-testable hypotheses derived from the study of physical processes or living things; apply logical reasoning skills effectively through scientific criticism and argument; and apply techniques of discovery and critical thinking effectively to solve scientific problems and to evaluate outcomes
- Communicate scientific knowledge, thoughts, and reasoning clearly and effectively.

GE SLO assessment:

- SLOs will be measured through, a creative group project (Bugge Faire) that includes an oral presentation to communicate science, quizzes and exams that will require reflection of course topics on the global impact of insects in arts, culture, and public health.
- Students will learn components of the process of science, observe behavior of caterpillars, and will evaluate a research paper, "Locomotion of the Mexican Jumping Bean". Students will then be asked to identify research variables (independent, dependent, and control) and formulate their own hypothesis based on their observations.

Global Learning Institute Goals for Bugs and People

Knowledge

1. Analyze how arthropod names are designated by the ICZN (International Code Zoological Nomenclature)
 - a. Evaluate examples related to mythological names and historical naming techniques

- b. Assessments: Online Quizzes
 - i. Global Mythologies (Egyptian, Greek, South American, and Native American) and Music Influence (Tarantella – Italy, Music in movies and video games)
 - ii. Taxonomy and Classification from the Ancients to Modern Cultural References
- 2. Feature experiential learning
 - a. **Outdoor adventure** with invasive ant species. Student research invasive species and how they entered the US from other countries. They observe how ants have a food preference (protein, oil, sugar) by observing foraging behavior.
 - b. Visit the **Florida Museum of Natural History** to research global efforts to use Agritourism and Ecotourism to discourage habitat destruction. Correlate knowledge from taxonomy and mythology lectures with names and specimens on display at the museum.

Skills

1. Compare global public health pest control efforts from ancient times, to the industrial revolution/WWI/WWII to modern society.
 - a. Assessment through qualitative discussion of how malaria mosquitoes were managed in 1943 to today. (Worldwide Neglected Diseases- videos and worksheet)
2. Reflect on how our culture has been shaped by both beneficial and pest insects.
 - a. Metacognition exercise - How has our language been influenced and how is it being influenced?
 - b. Compare global cultures to US culture in regards to perceptions of insects (positive and negative).
 - i. Assessment – jumping bean quiz - (See SLOs)
 - ii. Bugge Faire Project – Consciously see what they are learning through discussion, feedback from peers, Bugge Faire judges, and teacher comments. (See SLOs)
3. Predict how future humans will be impacted by arthropods.
 - a. Correlation with knowledge about invasive species (outdoor exercise), ecotourism (museum visit), case study interviews from students and faculty who have been impacted by arthropod vectored diseases, sampling of insect cuisine, interaction with arthropods of the world.

Attitude

1. Justify the need for global entomology education from the standpoint of agriculture, invasive species/climate change, and public health.
2. Guest lecture or virtual exchange to highlight global research in urban and medical entomology and to challenge students to make a difference globally.
3. Class discussion and follow-up with research opportunities for undergraduates.

UF POLICIES - If you are having difficulties in class, please make an appointment to see me, or if appropriate, call one of the counseling services below. Please do not wait until the end of the semester!

Grades and Grade Points

For information on current UF policies for assigning grade points, see <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>.

Attendance and Make-Up Work

Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at: <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>.

Online Course Evaluation Process

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals in Canvas. Guidance on how to give feedback in a professional and respectful manner is available at: <https://gatorevals.ua.ufl.edu/students/>. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at: <https://gatorevals.ua.ufl.edu/public-results/>.

Academic Honesty

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: *"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."* You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: *"On my honor, I have neither given nor received unauthorized aid in doing this assignment."*

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code>.

Software Use:

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Services for Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation
0001 Reid Hall, 352-392-8565, <https://disability.ufl.edu/>

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu*
Counseling Services Groups and Workshops Outreach and Consultation Self-Help Library Wellness Coaching
- U Matter We Care, www.umatter.ufl.edu/
- *Career Connections Center, First Floor JWRU, 392-1601, <https://career.ufl.edu/>. Student Complaints:*

- Residential Course: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>.
- Online Course: <http://www.distance.ufl.edu/student-complaint-process>

Additional information

Instructors may choose to clarify in their syllabus their teaching philosophy, expectations for classroom behavior, utilization of e-learning, and other information that will help students succeed in the course.

Distance Education - Each online distance learning program has a process for, and will make every attempt to resolve, student complaints within its academic and administrative departments at the program level. See <http://distance.ufl.edu/student-complaints> for more details.

UF Online Class Recording Policy

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.