**ENY 1002C: Principles of Entomology**

**Valencia College West**

**Instructor:** Dr. Denise DeBusk

**Phone:** (407) 582-5100

**Email:** [ddebusk@valenciacollege.edu](mailto:ddebusk@valenciacollege.edu) or through Canvas email

**Modality:** Mixed-mode

**Student Engagement Hours:**

* Monday-Wednesday 9:30am-12:30pm (online)
* Thursday 12-1pm, 3-4pm (on campus)
* Friday 9:30-10:30am (online)

**Credit Hours:** 3

**Class Days, Times, and Location:**

#### **Lecture: Virtual (Canvas)**

* **Laboratory:** Thursdays 1:00-3:00pm on West campus, Building 1, Rm 228

**Prerequisites:** This course does not require any prerequisites.

# **Welcome to the Course!**

Entomology is the study of insects, including their relationships with other animals, their environments, and human beings. Insects outnumber all other forms of life combined, and perform functions vital to life on earth. Consequently, entomologists make many important contributions to scientific knowledge, such as the best ways to pollinate crops, conserve insect species, and protect crops, trees, wildlife, and livestock from pests. Understanding the roles insects play in their environments can also help us restore disturbed ecosystems and clean up contaminated sites. When growing plants, being able to identify insects and understand their life cycle can allow us to better manage them and their damage.

# **Course Information**

## **Course Description**

This course involves the discussion of major plant insect pests, their characteristics, identification, life cycles and type of injury inflicted and analysis of various control measures including cultural, biological and chemical methods. It also includes pesticides, methods of application and precautions in handling.

## **Course Outcomes**

There are several broad learning goals we will help you achieve by the end of this course. Specifically, you will:

1. Describe the basic biology, structure, and function of insects.
2. Identify major insect orders found in the environment.
3. Describe categories of beneficial and pest insects.
4. Describe the strategies of and design an integrated pest management program.

## **Textbooks**

Although no textbook is required, there are some inexpensive optional books. I recommend getting Backyard Bugs if you plan on doing the extra credit photo insect collection. It identifies the most common arthropods in Florida and lets you know where you can find them (in the air, at night, on the ground, etc.). The Photographic Atlas of Entomology and Guide to Insect Identification will be helpful to use for your activities. The Insects: An Outline of Entomology book is optional to purchase and there is a free pdf included in the class.

* Daniels, J.C. (2017). Backyard Bugs. Adventure Publications. (ISBN: 978-1-59193-685-5) ***(required)***
* Castner, J.L. (2000). Photographic Atlas of Entomology and Guide to Insect Identification. Feline Press, Inc. (ISBN: 978-0962515040) ***(optional)***
* Gullan, P.J. (2014). The Insects: An Outline of Entomology. Wiley-Blackwell. (ISBN: 978-1118846155) ***(optional)***

## **Valencia College Core Competencies**

This course seeks to reinforce the following Valencia Student Competencies: **Think** clearly, critically and creatively by analyzing, synthesizing, integrating and evaluating symbolic works and truth claims. Reflect on your own and others’ **values** from individual, cultural and global perspectives. **Communicate** by reading, listening, writing and speaking effectively. **Act** purposefully, reflectively and responsibly by implementing effective problem solving and decision making strategies.

# **Our Inclusive Learning Environment**

Your success in this class is important to me. We all learn differently and bring different strengths and needs to the class. We expect everyone in this class to contribute to a respectful, welcoming, and inclusive environment to support the learning of all other members of the class. If there are aspects of the instruction or design of this course that result in barriers to your inclusion or accurate assessment or achievement, please let me know as soon as possible.

If you have a disability and require accommodations, please let me know during the first two weeks of the semester. You will need to register with the Office for Students with Disabilities (OSD) (West Campus SSB 102, 407-582-1523). OSD determines accommodations based on appropriate documentation of disabilities and provides a letter to me with them.

# **What to Expect in this Class?**

## **Teacher Expectations**

I believe that anyone can succeed in the class if the right learning environment and strategies are used. I have structured this course to provide a variety of learning assessments with diverse learners in mind. I value your uniqueness and experience and want you to value your classmates as well. We are all learning together so please reach out to me if you have any questions or need extra assistance. I am here to help you learn.

* I will follow the course outline as closely as possible and will notify you of modifications in the outline if they happen.
* I will attempt to create and maintain a classroom atmosphere in which you feel free to both listen to others and express your views and ask questions to increase your learning. I like to see the class as a community.
* Please email me if there is anything you want to discuss or about which you are unclear. I want to be supportive of your learning and growth.
* I will provide feedback/grades within a **week (7 days)**, often earlier, on the submitted assignment. It will be posted to the Canvas Gradebook.

## **Student Expectations**

Set goals for yourself for this course and plan/work to meet them. Meet all course deadlines and you will receive feedback within a week on the submitted assignment. Value your classmate’s opinions and be open to learn new ways of thinking. Complete all assignments, quizzes, and projects without sharing/copying other’s work or answers and be proud of your work.

* Please inform me by email if there is something that prevents you from turning in assignments.
* You are expected to check your Atlas email and Canvas inbox on a regular basis throughout the week.
* Since this is a mixed-mode class, some of it is spent at the comfort of a computer, you can expect to devote **3-6 hours** each week (including class time) to this course.
* Feel free to share feedback regarding how well the class is meeting your needs or if material is unclear. I make changes to the class based on feedback, either on the spot or in the future.
* It is also expected that you will treat classmates with respect and observe the rules of confidentiality regarding personal information shared in class.

# **How your Learning will be Assessed?**

All assignments will be turned-in according to the schedule outlined in the course calendar.

**Video Guides:** Video guides include questions from the videos that will assist you in studying for the quizzes. I include scripted PowerPoints with each video since certain people learn in different ways. It is expected that your answers for your video guides will be in your own words or paraphrasing what I provide. Do not copy and paste paragraphs or sentences from the PowerPoint script. The best way to learn is to handwrite the answers and take a photo of your video guide, although you can type your answers.

**Activities:** Activities are designed to enhance the material by giving you practical experience and examples. Activities are graded for completion, but questions on the quizzes will be drawn from the activities as well.

**Quizzes:** Quizzes help reinforce the information covered. You will have online quizzes on each topic. It will consist of multiple-choice, true/false, and matching. Each quiz will have a time limit of 20 minutes. Quizzes will be due on Sunday. You need to download Respondus Lockdown Browser to take the quizzes. Your lowest quiz grade will be dropped.

**Projects:**

* **Greenhouse IPM Project:** Students will choose a pest to devise a pest management plan, focusing on biological control. Students will create a poster and present it in a mock “poster session.” Those that miss the poster session will need to make arrangements with me for a makeup.
* **Crop Pest and Beneficial ID Cards:** You will choose a cropping system, such as landscape, nursery ornamentals, fruit trees, agronomic crops, vegetables, greenhouse ornamentals, etc. and research the types of pests (insects or mites only) and beneficials in that system. You will create identification cards for those organisms in a PowerPoint or Word document.

**Insect Collection:** Every student is required to submit a photo insect collection in lieu of a final exam. You will have opportunities during lab to do collecting, including aquatic collecting, sweep netting, and other techniques, as well as 2 field trips off-campus to give you more opportunities. You will need to collect outside of class time as well. A mini collection of 5 insects is due mid-way in the semester to check that it is done properly. The final collection requires 15 different insects that are properly identified and classified.

**Class Participation:** Class participation is crucial to the success of the course. There will be group and individual activities during class. Participation is worth 10 points per session. Students that are tardy between 5-20 minutes will lose 2 points. If you do not fully participate (e.g., paying more attention to phone/computer than class, refusing group work, not answering questions, listening to headphones) or leave class early without a heads-up, you will lose points. If you leave early for class without a reason, you will lose points in proportion to the amount of time. Excused absences will not lose participation points. If you have a documentable excuse, I will excuse the absence and you will not lose participation points, but it will still go toward your absences.

**Extra Credit:** There are extra credit activities on most of the topics worth 1 point each on your exam score.You can also get extra credit for completing your Student Feedback at the end of the semester.

**A pie chart with text

Description automatically generatedLate Work/Makeup Policy:** Since life sometimes gets in the way, your lowest exam grade will be dropped. Additionally, there is a two-week grace period after assignments are due (except for those assignments near the end of the semester). During this time, late work is eligible for partial credit (2% deduction per day). If there are extenuating circumstances, please contact me as early as possible to discuss your options.

## **Grading Scale**

A = 89.5-100%, B = 79.5-89.49%, C = 69.5-79.49%, D = 59.5-69.49%, F = below 59.49%

Your grade will be calculated as follows:

1. Video Guides – 15%
2. Activities – 15%
3. Quizzes – 30% (lowest grade dropped)
4. Projects – 20% (10% each)
5. Insect Collection – 15% (Mini-collection 5%)
6. Participation – 5%

# **TENTATIVE COURSE SCHEDULE**

| **Week** | **Online Topic** | **Activity** | **Activity** |
| --- | --- | --- | --- |
| Aug 21-27 | Orientation | Dissecting Microscope 101 and look at pests | Orientation Quiz\*  Be in the Know Assignment\* Introductions  Library Workshops |
| Aug 28-Sept 3 | Introduction to Entomology | Look at arthropod collection, Introduce Photo Collection and Collecting on campus | Video Guide (due Aug 30)  Eyewitness Insect Video Quiz **Quiz 1** |
| Sept 4-10 | Insect Classification | Dichotomous Keys, Who am I, and Look at Orders | Video Guide (due Sept 6)  Who am I? Activity  **Quiz 2** |
| Sept 11-17 | Metamorphosis, Growth & Development | Collection Trip | Video Guide (due Sept 13)  Activity: Insect Development and Management  **Quiz 3** |
| Sept 18-24 | External Morphology | External Anatomy Lab | Video Guide (due Sept 20)  Activity: External Anatomy Lab  **Quiz 4** |
| Sept 25-Oct 1 | Internal Morphology | Insect Dissection | Video Guide (due Sept 27)  Activity: Insect Dissection  **Quiz 5** |
| Oct 2-8 | Insects as Pests | Mini-lecture and Biological control; introduce project | Video Guide (due Oct 4)  Activity: Florida Invasive Insects  **Quiz 6** |
| Oct 9-15 | Integrated Pest Management | Scouting for Pests; Kids Ranch (with Robby) | Video Guide (due Oct 11)  Mini-Collection  **Quiz 7** |
| Oct 16-22 | Chemical Control | Pesticide Review | Video Guide (due Oct 18)  Activity: What Pesticide is this?  **Quiz 8** |
| Oct 23-29 | Greenhouse Pest Management Project | **Greenhouse IPM Poster** | Project: Poster Presentation |
| Oct 30-Nov 5 | Ground-Dwelling Insects and Aquatic Insects | Mini-lecture; Aquatic Dipping | Video Guide (due Nov 1)  Activity: Aquatic Insect Adaptations  **Quiz 9** |
| Nov 6-12 | Insects and Plants | Show and tell crop pests; work on project | Video Guide (due Nov 8)  **Crop Pest and Beneficial ID Cards**  **Quiz 10** |
| Nov 13-19 | Insect Societies and Predation and Parasitism | Show and tell; work on colony collapse | Video Guide (due Nov 15)  Activity: Colony Collapse Disorder Curation  **Quiz 11** |
| Nov 20-26 | ***Thanksgiving Break*** |  |  |
| Nov 27-Dec 3 |  | Collect on campus (if needed) – NO CLASS | **Final Insect Collection** |
| Dec 4-7 |  | Insect Collection (late days) |  |

**Bold** = summative assessments (based on correctness) \* = required to get into modules

## **Vacations and other important dates**

* Aug 21 – Classes begin
* Aug 28 – Drop/Refund Deadline
* Sept 4 – Labor Day (no class)
* Oct 27 – Withdrawal deadline
* Nov 10 – Veterans Day (no class)
* Nov 22-26 – Thanksgiving Break (no classes)
* Dec 8 – Term ends

# **How can you Contact Me?**

You may contact me in various ways during this semester.

* You may contact me through the [Canvas Inbox](https://online.valenciacollege.edu/conversations). This is probably the best and quickest method of communication. I will respond to your message within 48 hours, often much sooner, with the exception of days and times when the college is closed.
* You may email me at [ddebusk@valenciacollege.edu](mailto:ddebusk@valenciacollege.edu). In your messages (if not using the Canvas Inbox), please indicate your course number so that I may better assist you.
* You may schedule to meet me in my office when I’m on campus or talk to me before or after class.
* If you prefer to speak to me directly, my **Valencia phone number** is (407) 582-5100, and I will be happy to make an appointment with you.

# **What Policies are in the Course?**

**No Show Policy**

Since this is a mixed-mode class, attendance is counted during the face-to-face sessions. If you do not attend class the first week, you will be withdrawn from the class as a “no show.” You will still be financially responsible for the class and a final grade of “WN” will appear on your transcript for the course. If you are unable to attend class during the first week, notify me as early as possible and we can discuss your options. If you are not planning to continue the class, make an effort to drop the course before the deadline.

## **Attendance Policy**

The College believes that regular attendance and class participation are significant factors which promote success in college. Students are expected to attend all face-to-face sessions unless unavoidable emergencies prevent attendance. An attendance sheet will be passed around at the beginning of every class. Email me if you are planning on being absent and your reason. Excused absences will not lose participation points.

**Tardy Policy**

Students arriving more than five (5) minutes late will be recorded as being absent from class unless they notify the instructor of their presence in class at the end of the period. Students that are tardy will lose participation points.

**Withdrawal**

The deadline for Drop/Refund is **Aug 28th** and for Withdrawal is **Oct 27th**. Per [Valencia policy](http://catalog.valenciacollege.edu/academicpoliciesprocedures/courseattemptscoursewithdrawal/) a student who withdraws from class before the established deadline for a particular term will receive a grade of “W. A student is not permitted to withdraw after the withdrawal deadline.

If you are withdrawn, you will receive a grade of “W”. This can affect you financially and cause problems with any future financial aid you receive. After the withdrawal deadline, I will not withdraw you and you will receive the grade earned at the end of the course. If you withdraw from a class during a third or subsequent attempt in the same course, you will automatically be assigned a grade of “F.” If you do not intend to complete the course, you must withdraw yourself prior to the withdrawal date. Prior to withdrawing, please reach out to me to discuss your situation.

**Academic Integrity**

Valencia College is a community of scholars committed to the values of integrity. In this community, all members including faculty, staff, and students alike are responsible for maintaining the highest standards of academic honesty and quality of academic work. As a student and member of the Valencia College community, you are expected to demonstrate integrity in all of your academic endeavors. Unacceptable behavior include cheating, fabrication, plagiarism, using unauthorized study aids, or facilitating academic misconduct. Please review our campus policy on [academic integrity](https://valenciacollege.edu/about/general-counsel/policy/documents/volume8/8-11-academic-dishonesty.pdf).

All work submitted by you is expected to be the result of your individual thoughts, research, and self-expression. Whenever you use ideas, wording, or organization from another source, the source shall be appropriately acknowledged. Copying and pasting from an online source without paraphrasing the information first, even if providing a reference, is still considered plagiarism. If too much of your work is similar, I will allow a rewrite for up to 50% of the assignment score for the first offense. A second offense will result in a zero score on the assignment and a third offense will result in a class grade of F. Take advantage of the project check-ins to receive feedback on your writing. As an alternative to the 50% rewrite, you can resubmit your work within the grace period with the partial point deduction.

**College Student Conduct Policy**

Valencia is dedicated not only to the advancement of knowledge and learning but also to the development of responsible personal and social conduct. As a registered student, you assume the responsibility for conducting yourself in a manner that contributes positively to Valencia’s learning community and that does not impair, interfere with, or obstruct the orderly conduct, processes, and functions of the college as described in the [Student Code of Conduct](https://valenciacollege.edu/about/general-counsel/policy/documents/Volume8/8-03-Student-Code-of-Conduct.pdf). Examples of disruptive or distracting activities include, but are not limited to the following:

* Being noisy when arriving late to class or leaving early.
* Carrying on private conversations while the professor is talking.
* Disrespectful language, tone and mannerisms.
* Sleeping or attempting to sleep in class.

## **Netiquette**

It is important to be aware of your behavior in an online learning environment to ensure positive interactions with your instructor and peers. This requires you to follow some guidelines for behaviors.

All students are expected to:

* Show respect for the instructor and for other students in the course
* Respect the privacy of other students
* Express differences of opinion in a polite and rational way
* Maintain an environment of constructive criticism when commenting on the work of other students
* Remain focused on the learning topics during discussions and activities

## **Third Party Software & FERPA Policy**

Valencia College has a firm commitment to protecting the privacy rights of its students. Under no circumstances will your test scores, total points, or final grades be discussed on the telephone or over e-mail.  FERPA rights to privacy prevent the divulging of scores or related materials by these means. Access your scores through the Canvas gradebook.

## **Food/Drink and Break Policy in Class**

You cannot eat in the classroom per science department policy. You may have a drink with you as long as it is in a container with a lid. During the insect dissection lab, drinking in the lab is not permitted due to the chemicals the insects are stored in. Since it is a two-hour class, you may keep any snacks in your backpack and leave at any time if you need a quick snack. We will not have a formal break, but if you need to stretch or use the restroom, feel free.

# **Student Resources for Support and Learning**

As a Valencia College student, you may experience challenges such as struggles with academics, finances, or your personal well-being. Valencia College has a multitude of resources available to all students. Many of these resources are listed below and we encourage all students to explore them as needed. **If you are experiencing a mental health emergency please contact 9-1-1 or BayCare Behavioral Health at (800) 878-5470.**

* **Student Assistance Program:** Valencia students can get immediate help with issues dealing with stress, anxiety, depression, adjustment difficulties, substance abuse, time management as well as relationship problems dealing with school, home or work. [BayCare Behavioral Health Student Assistance Program](https://baycare.org/services/behavioral-health/assistance-programs/student-assistance-program/valencia-college) services are free to all Valencia students and available 24 hours a day by calling (800) 878-5470. Free face-to-face counseling is also available.
* **Valencia Counselors:** Valencia counselors care about your emotional well-being so they offer both virtual and in-person options to connect with students. Connect to counselors through the [student support form](https://valenciacc.ut1.qualtrics.com/jfe/form/SV_40fCWDqhRBjrNrv).
* **Pooky’s Pantry:** It is a free resource that offers non-perishable food items, hygiene items, socks, outside resource information, and local housing information. There are [locations](https://valenciacollege.campuslabs.com/engage/organization/pookyspantry) on each campus.
* **Advising:** The advisor for the Plant Science and Agricultural Technology program is Gabi Cerda. She can be reached at [gcerda@valenciacollege.edu](mailto:gcerda@valenciacollege.edu) or 407-582-1108. She is a great resource for questions about classes, degree programs and certificates, graduation, and transferring to a university.
* **Learning Support:** Learning Support Services provides students with academic support through distance tutoring, face to face tutoring at the campuses, writing consultations, library services, and resources. Tutoring is offered in most academic disciplines including math, science, foreign languages, English for academic purposes (EAP), computer programming and writing assistance for any course. For more information on how to access tutoring and library research assistance, please visit the college-wide [Learning Support Services LibGuide](https://libguides.valenciacollege.edu/distancetutoring).
* **Skillshops:** [Skillshops](https://valenciacollege.edu/students/student-services/skillshops.php) are free workshops, or mini courses that provide real-life solutions to common student issues.
* **Career Center:** Don’t wait until your last year – visit the [career center](https://valenciacollege.edu/students/career-center/) today!
* **Library**: At each campus library, librarians and other qualified staff can assist students with searching and finding items and information, MLA and APA citations, and technologies. The library provides a variety of books, eBooks, online articles, textbooks, DVDs and streaming videos to support course-related research and other learning needs. View the [Library website](http://valenciacollege.edu/library/) for more information.

# **How to Succeed in this Course?**

There are many ways for you to show us what and how you are learning, through your effort, interaction and class participation, application of scientific thinking to solve real world problems, and performance on assignments and quizzes. This class has been structured to help all students get the support and guidance needed to succeed in your learning. The below graphic is how the class is structured to best facilitate learning. If you skip ahead, such as missing an activity because it will take too long, this breaks the chain in understanding and you may not do as well on the quiz or your project. If you miss the project check-ins then you may receive a grade that you weren’t expecting because you misinterpreted the rubric. The following tips will help you be successful in this class and in other classes throughout your career at Valencia College.

A diagram of entomology model

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* “LEARNING” IS AN ACTION VERB!!Most students need to do more than just watch lectures and reread their notes.  **Spend 1-2 hour blocks of time several days a week** actively writing or discussing concepts to make them a part of your memory. Use the words you learn often, they will sink in better.
* **Check Canvas every other day**and **change your settings** so you are getting the notifications for announcements and submission comments in your email. You don’t want to miss an important announcement or extra credit opportunity.
* **Progress through the modules** rather than relying on the to-do list on Canvas.The module is set-up to guide you through material and increase mastery of the information.
* **Do the extra credit activities!** These interactive activities have been specifically designed to complement the quizzes, so they are a great review. If you get 75% correct, you get a point. If you get less, then you get a 0.5 point. Open book and no pressure.
* **Make to-do lists and prioritize tasks.**Record all the things you need to accomplish then focus on completing one task at a time. Prioritize your task based on the most critical and time-sensitive ones. You can use paper to-do lists or an app. Don’t forget to reward yourself for a job well done once tasks have been successfully completed.
* **Eliminate distractions**so your attention is on the task-at-hand. You will finish tasks and move on to the next ones more quickly while paying more attention to details. Turn off the TV, put your phone on silent, and keep your study area organized.
* **Take good notes and make flash cards.**Record the key points of the video or lecture and answer your video guides without writing down too much extraneous information. Flash cards are great for all the new terminology.
* **Take a break.** Take a 10-15 minute break each hour or a 5-minute break after every 20 minutes of studying. This will prevent you from burning out too soon and you are more likely to retain the material compared to studying 3 hours straight. Good break options include listening and singing to a song, taking a walk, or getting a snack.
* **Ask questions.**Make lists of confusing topics from your studying and ask questions (as many as you can!). Talking to your professor helps you as well your professor to refocus on the topic again.