**IPM1301C: Principles of Integrated Pest Management**

**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 12-1:30pm (on campus)
* Friday 1-2:30pm (online)

**Credit Hours:** 3

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

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

* **Laboratory:** Thursdays 1:45-3:45pm on West campus, Building 1, Rm 228

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

# **Welcome to the Course!**

Did you know that managing pests can be a complex, and sometimes, frustrating situation? Integrated Pest Management (IPM) is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Pesticides are used only after monitoring indicates they are needed according to established guidelines, and treatments are made with the goal of removing only the target organism. The selection and application of pest management strategies focus on minimizing risks to human health, beneficial and nontarget organisms, and the environment. Now that sounds complicated. In this course, you will learn more about each of the strategies for managing pests, as well as specifics for different groups of pests, such as arthropods, weeds, diseases, and nematodes. To help apply this to a crop important to you, there is a project where you analyze the management of different pests on that crop.

# **COURSE INFORMATION**

## **Course Description**

This course introduces students to a wide range of pest control methods for weeds, insects and pathogens. Coursework also involves classification, mode of action, toxicity, mixing, registration and safe application techniques of pesticides used in the pest control industry**.**

## **Course Outcomes**

By the end of the course you will:

1. Demonstrate an understanding of the principles of an Integrated Pest Management Program.
2. Identify symptoms caused by the wide variety of plant pests.
3. Design and manage an integrated pest management program.

## **Textbooks**

Flint, M.L. (2012). IPM in Practice: Principles and Methods of Integrated Pest Management (Second Edition). University of California. (ISBN: 978-1601077851)

## **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 an online atmosphere in which you feel free to both read others’ views and express your own views, as well as ask questions to increase your learning.
* Please email me about anything that you are unclear. I tend to respond quickly and I want to be supportive of your learning and growth.
* I will posts grades to the Canvas Gradebook and provide feedback within **a week** **(7 days)** for a submitted assignment.

## **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, exams, and exams without sharing/copying other’s work or answers and be proud of your work.

* Please inform me by phone or e-mail if you will miss class and why and get notes and other class information from a fellow student. I recommend exchanging phone numbers with your tablemates.
* You are expected to check your Atlas email and Canvas inbox on a regular basis throughout the week.
* Since this is an online class, all of it is spent at the comfort of a computer; you can expect to devote **3-6 hours** each week 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.

**Exams:** To reinforce the concepts you have learned in the unit, you will complete a unit exam. Questions may include multiple-choice, matching, and true/false. You need to download Respondus Lockdown Browser to take the exams and you will have 60 minutes to take it. In order to review for the exams and give you a buffer on your grade, you will have extra credit review activities worth up to one point each to go toward your exams.

**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. The answers to your video guides should be in your own words or paraphrasing what I provide. The best way to learn is to handwrite the answers and take a photo of your video guide, although you can type your answers. Video guides are due the day before class.

**Activities:** There will be associated activities designed to help you practice the material or learn more in-depth on a topic.

**Final Project:** This project gives you the opportunity to take an in-depth look at the insect/mite, disease or nematode, and weed problem, as well as beneficial organisms that a single crop or cropping system faces and create an overall IPM program. You will create a PowerPoint presentation and trifold poster on your project and present it in class. You will review your peers’ presentations and reflect on them.

**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, 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.

**Late Work/Makeup Policy:** Since life sometimes gets in the way, there is a two-week grace period after assignments are due. 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.

**Extra Credit:** Students have the opportunity to earn extra credit by completing their Student Feedback at the end of the semester. For each chapter, you can complete up to 1 point on your exam for an extra credit activity. These worksheets are a good review for the exams.

**Student Feedback on Instruction (SFI):** Near the end of the term, you will receive an invitation through your Valencia email account asking you to complete the Student Feedback on Instruction (SFI). This is a survey which provides us with feedback on your experience in this class and helps us improve the course. The results are released only after grades are submitted. Student names are not included in the results –your responses will be anonymous. You will get an email from Valencia informing you when the SAI **A pie chart with text overlay

Description automatically generated**survey will open.

## **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. Exams (3) – 35%
2. Video Guides – 20%
3. Activities – 20%
4. Final Project – 15%
5. Participation – 10%

# **TENTATIVE COURSE SCHEDULE**

| **Class Date** | **Online Topic** | **Class Activities** | **Assignments** |
| --- | --- | --- | --- |
| Jan 8-14 | IPM Concept | Orientation; IPM Exploration Activity | Orientation Quiz, Be in the Know  Library Workshops  Video Guide  Activity: IPM Exploration |
| Jan 15-21 | Introduction to Pests | Pest Scavenger Hunt on campus | Video Guide (due Jan 17)  Activity: Pest Scavenger Hunt |
| Jan 22-28 | Monitoring and Decision-Making | Scouting Activity; Grain Crop IPM | Video Guide (due Jan 24)  Activity: Grain Crop IPM |
| Jan 29-Feb 4 | Host Resistance & Biological Control | Cane Toad Case Study;  Work on activity | Video Guide (due Jan 31)  Activity: Biocontrol Presentations |
| Feb 5-11 |  | **Field Trip** | **Exam 1**  Extra Credit Reviews (4) |
| Feb 12-18 | Mechanical & Cultural Controls | Pest Management Scenarios | Video Guide (due Feb 14)  Activity: Pest Management Scenarios |
| Feb 19-25 | Intro to Pesticides and Labeling | Pesticides Case Study; go through AgriStarts activity | Video Guide (due Feb 21)  Activity: Analysis of AgriStarts IPM Program |
| Feb 26-Mar 3 | Health and Environmental Concerns | When Work Makes You Sick Case Study; Overview of IPM Project | Video Guide (due Feb 28)  Activity: When Work Makes You Sick |
| Mar 4-10 |  | **Field Trip** | **Exam 2**  Extra Credit Reviews (3) |
| Mar 11-17 | Arthropods and their Management | Arthropod Case Studies; look at insects under microscope; work on project | Video Guide (due Mar 13)  Project: Arthropod Case Studies |
| Mar 18-24 | ***Spring Break*** | | |
| Mar 25-Mar 31 | Plant Pathogens and their Management; Abiotic Disorders | Disease and Abiotic Case Studies; work on project | Video Guide (due Mar 27)  Activity: Disease and Abiotic Disorders Case Studies |
| Apr 1-7 | Nematodes and their Management | Nematode Case Studies; work on project | Video Guide (due Apr 3)  Activity: Nematode Case Studies |
| Apr 8-14 | Weeds and their Management | Weed Case Studies; work on project | Video Guide (due Apr 10)  Activity: Weed Case Studies |
| Apr 15-21 |  | **IPM Plan Project Poster Session** | **Project: IPM Plan** |
| Apr 22-25 |  | No class | **Exam 3**  Extra Credit Reviews (4) |

## **Vacations and other important dates**

* Jan 8 – Classes begin
* Jan 15 – Martin Luther King Jr Day (no classes)
* Jan 16 – Drop/Refund Deadline
* Feb 9 – Learning Day (no classes)
* Mar 15 – Withdrawal deadline
* Mar 18-24 – Spring Break (no classes)
* Apr 28 – Term ends

# **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. A student will be withdrawn after 4 excused or unexcused absences. You will receive a warning email after your third absence. 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 **Jan 16th** and for Withdrawal is **Mar 15th**. 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 cannot withdraw after the withdrawal deadline.

Since I have an attendance policy, I can withdraw you for violation of that policy, but I strive to work with you so that you can complete the class. 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 or is withdrawn from a class during a third or subsequent attempt in the same course, you will automatically receive 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, you need to acknowledge the source appropriately. It is still considered plagiarism if you copy and paste from an online source without paraphrasing the information first, even if providing a reference. Since writing can be difficult, I will provide you resources to assist your efforts. 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).

## **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 percentage, 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.

# **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. Valencia College offers tutoring 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 exams. 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 exam or your project. If you miss the project meetings and updates then you may receive a grade that you weren’t expecting because you are letting your team down. The following tips will help you be successful in this class and in other classes throughout your career at Valencia College.

# A diagram of a credit card Description automatically generated

* “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.
* **Do the extra credit activities!** I designed these interactive activities to complement the exams, 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.
* **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.
* **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.**Record the key points of the video or lecture and answer your video guides without writing down too much extraneous information.
* **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.