



UF/IFAS Master Beekeeper Program

**LEVEL
1**

APPRENTICE \$250

Everyone starts at the Apprentice level, regardless of beekeeping experience. This course provides a foundation for science-based beekeeping. If you want to join the UF/IFAS MBP, simply [register for the Apprentice course](#).

**LEVEL
2**

ADVANCED \$300

You can start working on the Advanced course as soon as you become an Apprentice Beekeeper. You will receive a registration link for this course after you become an Apprentice Beekeeper.

**LEVEL
3**

MASTER \$300

You can start working on the Master course as soon as you become an Advanced Beekeeper. You will receive a registration link for this course after you become an Advanced Beekeeper.

**LEVEL
4**

MASTER CRAFTSMAN TBD

We are currently working on the Master Craftsman online course, which will be available in January 2022. While the price is not yet set for this level, the course fee will be similar to those of the first three levels.

APPRENTICE Level Online Course Outline



MODULE 1: APPRENTICE LEVEL OVERVIEW

- Lesson 1: Navigating the Online MBP
- Lesson 2: Mission & Goals of the UF MBP
- Lesson 3: Requirements for the Apprentice Level

MODULE 2: INTRODUCTION

- Lesson 1: The Importance of Bees
- Lesson 2: Why Keep Honey Bees
- Lesson 3: Educational Resources for Beekeepers
- Lesson 4: Naming the Bee
- Lesson 5: What to do About Honey Bee Stings

MODULE 3: HONEY BEE BIOLOGY

- Lesson 1: Adult Members of a Honey Bee Colony
- Lesson 2: Immature Members of a Honey Bee Colony
- Lesson 3: The Components of a Honey Bee Nest
- Lesson 4: The Life Cycle of a Honey Bee Colony

MODULE 4: BEEKEEPING EQUIPMENT

- Lesson 1: The Parts of a Langstroth Hive
- Lesson 2: Frames & Foundation
- Lesson 3: Three Essential Beekeeping Items
- Lesson 4: Miscellaneous Beekeeping Equipment
- Lesson 5: Alternative Hive Sizes & Types
- Lesson 6: Assembling Hive Equipment
- Lesson 7: Observation Hives

MODULE 5: GETTING STARTED

- Lesson 1: Hive Choice & Configuration
- Lesson 2: Starting a New Honey Bee Colony
- Lesson 3: The Monetary & Time Requirements of Beekeeping
- Lesson 4: Rules & Regulations for Keeping Honey Bees
- Lesson 5: Your Bees & Other People
- Lesson 6: Qualities of a Good Apiary Location

MODULE 6: BEEKEEPING BASICS

- Lesson 1: Characteristics of a Healthy Honey Bee Colony
- Lesson 2: How to Light a Smoker
- Lesson 3: Proper Colony Inspection Techniques
- Lesson 4: Installing Packages & Nucs
- Lesson 5: Marking & Clipping Queens
- Lesson 6: Requeening
- Lesson 7: Basic Swarm Management Techniques
- Lesson 8: Making Splits
- Lesson 9: Feeding Bees
- Lesson 10: Moving Bees

MODULE 7: COLONY STRESSORS

- Lesson 1: Major Arthropod Pests of Honey Bee Colonies
- Lesson 2: Minor Arthropod & Other Pests of Honey Bee Colonies
- Lesson 3: Pathogen Stressors of Honey Bee Colonies
- Lesson 4: Other Stressors of Honey Bee Colonies
- Lesson 5: Principle of Honey Bee Colonies

MODULE 8: YEARLY MANAGEMENT

- Lesson 1: Introduction to *Varroa* Management
- Lesson 2: Spring & Summer Management
- Lesson 3: Fall & Winter Management

ADVANCED Level Online Course Outline



MODULE 1: ADVANCED LEVEL OVERVIEW

- Lesson 1: Navigating the Online MBP
- Lesson 2: Mission & Goals of the UF MBP
- Lesson 3: Requirements for the Advanced Level

MODULE 2: EDUCATION & COMMUNICATION

- Lesson 1: Backwards Design
- Lesson 2: Communication and Public Speaking
- Lesson 3: Visual Communication
- Lesson 4: Teaching Youth and Adult Audiences
- Lesson 5: Youth Protection Training

MODULE 3: THE EVOLUTION OF BEEKEEPING

- Lesson 1: Ancient Honey Bee and Human Interactions
- Lesson 2: The Evolution of Early Beekeeping
- Lesson 3: The Golden Age of Beekeeping
- Lesson 4: Beekeeping Today
- Lesson 5: Making Money with Bees
- Lesson 6: Introduction to Integrated Pest Management
- Lesson 7: Natural and Treatment-Free Beekeeping

MODULE 4: HONEY BEE PESTS

- Lesson 1: *Varroa* Biology
- Lesson 2: *Varroa* Monitoring
- Lesson 3: *Varroa* Control
- Lesson 4: Tracheal Mites
- Lesson 5: Small Hive Beetle Biology
- Lesson 6: Small Hive Beetle Control
- Lesson 7: Wax Moths
- Lesson 8: African Honey Bees
- Lesson 9: Bears
- Lesson 10: Ants
- Lesson 11: Minor Vertebrate Pests

MODULE 5: HONEY BEE PATHOGENS

- Lesson 1: Viruses
- Lesson 2: Chalkbrood
- Lesson 3: *Nosema*
- Lesson 4: American and European Foulbrood

MODULE 6: POLLINATION

- Lesson 1: Flower Morphology
- Lesson 2: Pollination Ecology
- Lesson 3: Animal Pollinators
- Lesson 4: Bees as Super Pollinators
- Lesson 5: Crop Pollination by Honey Bees

MODULE 7: HONEY PRODUCTION

- Lesson 1: How Bees Make Honey
- Lesson 2: Optimum Foraging Theory
- Lesson 3: Managing for Honey Production
- Lesson 4: Monofloral and Wildflower Honey
- Lesson 5: Toxic and Invasive Nectar Plants
- Lesson 6: Good and Bad Honey Plants

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ADVANCED Level Online Course Outline

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MODULE 8: HARVESTING & PROCESSING HONEY

- Lesson 1: Harvesting Honey
- Lesson 2: Extracting Honey
- Lesson 3: Post-Extraction Processing
- Lesson 4: Bottling Honey
- Lesson 5: Other Honey Products
- Lesson 6: Commercial Honey House Requirements
- Lesson 7: Commercial Honey Labeling Requirements
- Lesson 8: Cottage Food Honey Sales
- Lesson 9: Honey Shows and Judging

MODULE 9: OTHER HIVE PRODUCTS

- Lesson 1: Beeswax
- Lesson 2: Pollen
- Lesson 3: Mead
- Lesson 4: Propolis, Royal Jelly, Bee Brood
- Lesson 5: Apitherapy

MODULE 10: BEES, WASPS, & MIMICS

- Lesson 1: Differentiating Bees from Wasps
- Lesson 2: Common Bee Groups
- Lesson 3: Common Wasp Groups
- Lesson 4: Bee and Wasp Mimics



MASTER Level Online Course Outline

MODULE 1: MASTER LEVEL OVERVIEW

- Lesson 1: Navigating the Online MBP
- Lesson 2: Requirements for the Master Beekeeper Level

MODULE 2: COMMERCIAL POLLINATION

- Lesson 1: Moving Colonies
- Lesson 2: State Regulations
- Lesson 3: Hive Placement
- Lesson 4: Pollination Contracts

MODULE 3: PESTICIDES

- Lesson 1: Toxicology Definitions
- Lesson 2: Pesticide Impacts on Honey Bees
- Lesson 3: Routes of Pesticide Exposure
- Lesson 4: Pesticide Regulations
- Lesson 5: Understanding Pesticide Labels
- Lesson 6: Pesticide Formulations
- Lesson 7: Reducing Pesticide Risk to Pollinators in Ag
- Lesson 8: How Beekeepers can Reduce Pesticide Risk
- Lesson 9: Recognizing and Reporting Honey Bee Exposure

MODULE 4: INTEGRATED PEST MANAGEMENT

- Lesson 1: Determining Thresholds
- Lesson 2: Identify and Monitor
- Lesson 3: Prevention
- Lesson 4: Control
- Lesson 5: Can IPM Be Effective for Beekeeping?

MODULE 5: AFRICAN HONEY BEES

- Lesson 1: The Origin of African Honey Bees in the Americas
- Lesson 2: Biology and Behavior of African Honey Bees
- Lesson 3: Identification of African Honey Bees
- Lesson 4: Managing AHBs and Managing Against Them
- Lesson 5: African Honey Bees and Public Safety

MODULE 6: HONEY BEE & COLONY BEHAVIORS

- Lesson 1: Worker Honey Bee Tasks
- Lesson 2: The Honey Bee Dance Language
- Lesson 3: Thermoregulation by Honey Bees
- Lesson 4: Swarm Preparation
- Lesson 5: The Honey Bee Colony Swarm
- Lesson 6: Choosing a New Nest Site
- Lesson 7: Queen and Drone Honey Bee Behaviors

MODULE 7: MATING & REPRODUCTIVE BIOLOGY

- Lesson 1: Sexual Maturation of Queens and Drone
- Lesson 2: Drone Congregation Areas
- Lesson 3: Honey Bee Mating Behavior
- Lesson 4: Post-mating Maturation



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MASTER Level Online Course Outline

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MODULE 8: QUEEN & PACKAGE BEE PRODUCTION

- Lesson 1: Choosing Breeder Queens
- Lesson 2: Colony Preparation
- Lesson 3: Queen Production Timeline
- Lesson 4: Instrumental Insemination
- Lesson 5: Package Bee Production

MODULE 9: BEE REMOVAL

- Lesson 1: Bee-Proofing a Property
- Lesson 2: An Introduction to Bee Removal
- Lesson 3: Capturing and Trapping Swarms
- Lesson 4: Removing Established Honey Bee Colonies
- Lesson 5: Best Practices After Colony Removal

MODULE 10: THE COLONY AS A SUPERORGANISM

- Lesson 1: Honey Bee Colonies as Superorganisms
- Lesson 2: Food Collection, Processing, and Consumption
- Lesson 3: The Endocrine System in Honey Bee Colonies
- Lesson 4: Colony Respiration and Thermoregulation
- Lesson 6: Colony Immune System
- Lesson 7: Colony Communication, Reproduction, and Death



MASTER CRAFTSMAN Level Online Course Outline

MASTER CRAFTSMAN OVERVIEW

- Lesson 1: Navigating the Online MBP
- Lesson 2: Mission & Goals of the UF MBP
- Lesson 3: Requirements for the Advanced Level

CONDUCTING SCIENTIFIC RESEARCH

Introduction to Science and Research

- Lesson 1: What is Science?
- Lesson 2: Honey Bee Research
- Lesson 3: The Scientific Method
- Lesson 4: Research Ethics

Understanding Published Research

- Lesson 1: Navigating Published Research
- Lesson 2: Finding Good Research Sources
- Lesson 3: Experimental Design Basics
- Lesson 4: Introduction to Research Statistics

Conducting Experiments

- Lesson 1: Establishing a Research Focus
- Lesson 2: Experimental Design
- Lesson 3: Data Collection Methods in Honey Bee Research
- Lesson 4: Statistical Analyses
- Lesson 5: Communicating Research Findings to the Public

PLANNING & DELIVERING EXTENSION PROGRAMS

- Lesson 1: Intro to Extension Programs & Audiences
- Lesson 2: Determining Needs & Setting Objectives
- Lesson 3: Program Evaluation
- Lesson 4: Funding & Marketing Extension Programs
- Lesson 5: Program Plan & Learning Activities



*THE MASTER CRAFTSMAN COURSE IS NOT YET AVAILABLE.
THIS OUTLINE IS SUBJECT TO CHANGE.*