



UF/IFAS Master Beekeeper Program

LEVEL 1

APPRENTICE

\$250

Anyone can join the UF/IFAS MBP, simply by registering for the [Apprentice Beekeeper online course](#). Beekeepers with 2+ years of practical beekeeping experience may instead attempt to [test out of the Apprentice level](#). The test out fee is \$50, which will be applied to the cost of the Apprentice level course for any failed test out attempts.

LEVEL 2

ADVANCED

\$300

You can start working on the Advanced Beekeeper 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 Beekeeper 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

\$250

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

APPRENTICE Level Online Course Outline



MODULE 1: APPRENTICE LEVEL OVERVIEW

- Lesson 1: Navigating the Online Master Beekeeper Program
- Lesson 2: 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: 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 and Foundation
- Lesson 3: Three Essential Beekeeping Items
- Lesson 4: Miscellaneous Beekeeping Equipment
- Lesson 5: Alternative Hive Sizes and Types
- Lesson 6: Hive Choice and Configuration
- Lesson 7: Assembling Hive Equipment

MODULE 5: GETTING STARTED

- Lesson 1: Starting a New Honey Bee Colony
- Lesson 2: The Monetary and Time Requirements of Beekeeping
- Lesson 3: Apiary Location and Safety
- Lesson 4: Rules and Regulations for Keeping Honey Bees

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: Feeding Bees
- Lesson 5: Moving Bees
- Lesson 6: Requeening a Honey Bee Colony
- Lesson 7: Installing Packages and Nucs
- Lesson 8: Marking and Clipping Queens
- Lesson 9: Making Splits
- Lesson 10: Swarm Management Techniques
- Lesson 11: Preparing Hives for Winter

MODULE 7: COLONY STRESSORS

- Lesson 1: Major Pests of Honey Bee Colonies
- Lesson 2: Minor 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
- Lesson 6: Introduction to *Varroa* Management

MODULE 8: YEARLY MANAGEMENT

- Lesson 1: Spring and Summer Management
- Lesson 2: Fall and Winter Management

ADVANCED Level Online Course Outline



MODULE 1: ADVANCED LEVEL OVERVIEW

- Lesson 1: Navigating the Online MBP
- Lesson 2: 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: *Tropilaelaps*
- Lesson 6: Small Hive Beetle Biology
- Lesson 7: Small Hive Beetle Control
- Lesson 8: Wax Moths
- Lesson 9: African Honey Bees
- Lesson 10: Bears
- Lesson 11: Ants
- Lesson 12: Minor Vertebrate Pests
- Lesson 13: Overcoming Honey Bee Defenses

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 Honeys
- Lesson 5: Toxic and Invasive Nectar 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
Agricultural Settings

Lesson 8: How Beekeepers can Reduce Pesticide Risk to
Colonies

Lesson 9: Recognizing and Reporting Honey Bee Exposure
to Pesticides

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: Honey Bee Colonies as Superorganisms

Lesson 2: Worker Honey Bee Tasks

Lesson 3: Honey Bee Communication

Lesson 4: Respiration and Thermoregulation

Lesson 5: The Endocrine System in Honey Bee Colonies

Lesson 6: Colony Immune System

MODULE 7: HONEY BEE NUTRITION

Lesson 1: Nectar and Honey

Lesson 2: Pollen

Lesson 3: Larval Diet

Lesson 4: Adult Diet

Lesson 5: Food Collection, Processing, and Consumption

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MODULE 8: SWARMING

- Lesson 1: Colony Level Reproduction
- Lesson 2: Swarm Preparation
- Lesson 3: The Honey Bee Colony Swarm
- Lesson 4: Choosing a New Nest Site

MODULE 9: MATING & REPRODUCTIVE BIOLOGY

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

MODULE 10 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 11: 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



MASTER CRAFTSMAN Level Online Course Outline

MASTER CRAFTSMAN OVERVIEW

- Lesson 1: Navigating the Online MBP
- Lesson 2: Requirements for the Master Craftsman Level
- Lesson 3: Land-grant Institutions

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
- Lesson 5: Communicating Research Findings to the Public

Understanding Published Research

- Lesson 1: Navigating Published Research
- Lesson 2: Finding Good Sources of Research
- 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: Funding Research
- Lesson 5: Statistical Analyses

PLANNING & DELIVERING EXTENSION PROGRAMS

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

