

# ***Course Outline***    *Beginning Beekeeping in Missouri*    *East Central College-Union Missouri*

*6 classes (May 22 to June 26) Tuesdays 5:30 to 7:30 pm*

## Overview of Pollinators and Managed Beekeeping

For anyone wanting to learn about managing honey bees, they must understand, first and foremost, honey bees are pollinators. Many beneficial insects are pollinators. Attracting and protecting beneficial insects is something everyone, any age, can do, even if you don't have a garden or a green thumb.

After taking this course, students will have a better understanding of the following:

- How pollination works and differs from fertilization
- What are native and non-native insects
- The impact pollinators have on our food supply
- Why there is so much news coverage on Monarch Butterflies
- A Beekeepers calendar for their first couple of years
- What anyone can do to help pollinators, even if they decide not to keep managed honey bees.

## ***(Bees, Blooms and Butterflies for non-gardeners 125 cards)***

- Definitions of Farming and Gardening
- How view on insects has changed
- Beneficial Insects
- What is Pollination
- What is fertilization
- Plant and Pollinator relationship
- How insects follow the life cycle of plants
- Butterfly overview
- What is a bee.
- Native vs managed bees
- Planting for pollinators
- IPM Concepts
- Native Bees in peril
- Top ten things a beekeeper wants you to know

## ***(Overview of Managed Beekeeping and Products of the Hive 70 cards)***

- Definitions of Farming and Gardening
- Life cycles
- Managed Beekeeping definitions
- What is Pollination
- What is fertilization
- Plant and Pollinator relationship
- Bee Nutrition
- Importance of Pollen
- Fat Bees
- History of Honey
- History of bee's wax
- History of Hives
- Propolis
- Pollen
- Royal Jelly
- Bee Venom
- Different hats of a beekeeper

## **Bee Anatomy and Social Behavior**

Managing honey bees is different than managing other types of livestock. It is important to understand how the colony functions and the role for each member of the hive.

After taking this class, students will be able to:

- Identify the parts of a honey bee
- Explain the difference between a bee, a wasp and a fly
- Explain the difference between native and managed bees
- Explain the members of a hive and their duties
- Explain how and why a colony expands and contracts during the year.

## ***(Bee Biology 63 cards)***

- Bees Wasps Ants and Sawflies

- What is a bee
- Native vs managed bees
- Parts of a honey bee
- Members of the hive
- Caste System
- Development time
- Honey bee duties
- Spring vs Winter bees
- Overview on Systems
  - Nervous
  - Circulatory
  - Defense
  - Respiration
  - Reproductive
  - Digestive
  - Pheromones
- Bee dances
- Bee Races

## Honey Bee History, Hive Options and Equipment

Shelter is important for honey bees and the number of options for hives and equipment is growing. This class will cover the different types of hives available and when it would be appropriate to use each. Actual examples of equipment that the instructors use in their own apiary will be available for visual aids during the discussion. Where and when to locate your first hive, as well as safety issues will be presented.

*(Decisions for your first hive 57 cards)*

- Location
- Safety
- Calendar
- Package Introduction

## Honey Bee Nutrition

*(Feeding your Honey Bees 98 cards)*

The health of the hive and the production of salable products is so dependent on a plant's life cycle needs that knowing the basics of gardening is a requirement. Learning Objectives:

- Pollination overview
- How bees use Pollen
- How bees use Nectar
- How much nectar for honey
- Emergency Feedings
- Gardening basics
- Landscaping basics
- Sample garden
- Natural sources

### Honey Bee Diseases and Pests

Research has shown that if a beekeeper doesn't properly maintain a hive, it will not survive after the third year. The pest and disease pressures have grown over the past 40 or so years and it is important to know what to do to keep the delicate equilibrium in a colony.

Students will learn:

- Integrated Pest Management
- Common First Year Issues
- Pests and Diseases for later years
- Why bees abscond
- What makes a strong hive
- Recordkeeping tips
- Top Ten Mistakes of New Beekeepers

### ***(IPM Diseases and Pests 82 cards)***

- Why beekeepers leave
- Recordkeeping tips
- Why bees abscond
- Tips for hive inspections
- Signs of a strong hive
- What is IPM
- How host and predatory insects relate.
- Common First Year Issues
  - Burr Comb
  - Bearding

- Robbing
- Spotty Brood Pattern
- Laying worker bees
- Queen Cells
- Nosemosis
- Varroa Mites
- Small Hive Beetles
- Wax Moths
- USDA Honey bee colony Health Report
- Issues in following years
  - Viruses
  - EFB
  - Chalkbrood
  - Sacbrood
  - Tracheal Mites
  - AFB
  - Information on Veterinarian Feed Directive (VFD)
  - CCD
- Top Ten mistakes of New Beekeepers

### Honey Harvesting, Marketing and Value-added Products

Nothing is more satisfying than taking your first honey harvest. Many hives produce enough excess honey to encourage the beekeeper to start a small, side-line business.

From this class, students will learn about:

- Harvesting Honey
- Setting up a Very Small business
- Marketing Plan Basics
- Options for Products and venues
- Methods of calculating selling prices

### ***(Marketing and Honey Value-added products 84 cards)***

- Harvesting Honey
- Setting up a Very Small business
  - General Business Tips
  - General Food Handling Tips

- Honey Bill Rules
- Marketing Products
  - Supply and Demand
  - Psychology of why customers purchase
- Marketing Plan Basics
  - Marketing definitions
  - Flowchart of process
  - Six Questions of Selling
  - Options for Products
  - Options for Venues
  - Options for Promoting
  - Costing your product overview
- Personal Story of Jim n I Farms Marketing process
  - Selling on the Internet Overview
- Sampling of honey products