



California Master Beekeeper Program: Apprentice Level Syllabus

Description:

The mission of the California Master Beekeeper Program is to provide science-based education to future stewards and ambassadors for honey bees and beekeeping. The Apprentice level is designed to build a solid foundation of basic beekeeping skills and knowledge. Participants may stop at this level or continue on to the more advanced levels: Journeyman and Master.

Prerequisites:

- Must own/manage a minimum of one colony for at least one year prior to testing.
- Must have at least one registered hive where possible (certain counties do not have the ability to provide this service to the beekeepers, this will be confirmed prior to acceptance into the program).

Expectations and Goals:

Upon completion, apprentice level beekeepers will be able to:

- Light and appropriately operate a smoker
- Identify different casts in the colony
- Open and examine a colony
- Properly manage the colony throughout the year
- Be able to identify and take care of any issues that the colony encounters
- Identify and build/assemble standard hive equipment
- Be able to properly feed colonies if needed
- Prevent colony robbing
- Monitor for pathogens and pests
- Re-queen a colony

In order to maintain an active status in the program individuals will be responsible for two BEEs per year. The following activities are pre-approved for satisfying Apprentice Level CAMBP BEEs requirements:

- Presenting a bee-related lecture or workshop to non-beekeeping group (youth or adult).
- Holding office in a local beekeeping association.

- Assisting members of youth organizations (4-H, Scouts, FFA), etc. with a bee-related project.
- Successfully mentoring a new beekeeper through at least one season.
- Giving a public demonstration on beekeeping topic at fair, festival or similar public event.

Program Content

Required Text:

- First Lessons in Beekeeping – Keith Delaplane (2007) Available via: Dadant <https://www.dadant.com/catalog/m00001-first-lessons-in-beekeeping>
- CAMBP Study Guide – E.L. Niño and B.D. Niño

Supplemental Reading (not required, but strong educational information):

- The Beekeeper's Handbook, 4th Edition – Diana Sammataro, Alphonse Avitabile, Dewey M. Caron (2011)

Knowledge of the Following Topics Required:

Honey Bee Biology (Delaplane chapter 1 & 2)

- Species and Races of Honey bees (Also, Sammataro Pgs. 3-8)
- Characteristics and Individuals in the Hive
- Development
- Behavior
- Communication
- Morphology
- Immunity

Anatomy of the Hive (Delaplane chapter 3); (Also, Sammataro chapter 3)

- Apiary Selection and Orientation
- Hive Components
- Essential Beekeeping Equipment
- Useful beekeeping equipment
- Other Hives types

Starting and Managing Your Hives (Delaplane chapter 4)

- Obtaining Honey Bees
- Inspecting the Hive
- Seasonal Management

Products of the Hive (Delaplane chapter 5 & 6); (Also, Sammataro chapter 12)

- Honey
- Wax
- Bee Venom
- Royal Jelly
- Pollen
- Propolis

Common Maladies of the Hive (Delaplane chapter 8)

- Diseases
 - American Foulbrood
 - European Foulbrood
 - Chalkbrood
 - Nosemosis
 - Various viruses (Although please note, with advances in technology, new viruses are continually being identified)
- Parasites and Pests
 - Varroa mites
 - Tracheal mites
 - Small Hive Beetle
 - Wax moths
 - Mice
 - Ants

Basic Honey Bee IPM (Working Your Colonies class/CAMBP Study Guide Pg 53)

- Colony Losses
- Cultural Control
- Mechanical Control
- Biological Control
- Chemical Control

Recommended Reading:

- Honey Bees and Beekeeping: A Year in the Life of an Apiary, 3rd Edition – Keith Delaplane (2007)
- Honey Bee Biology and Beekeeping – Dewey Caron (2013)
- First Lessons in Beekeeping – Keith Delaplane (2007)
- The Backyard Beekeeper, Revised and Updated: An Absolute Beginner's Guide to Keeping Bees in Your Yard and Garden – Kim Flottum (2010)
- The Beekeeper's Handbook, 4th Edition – Diana Sammataro, Alphonse Avitabile, Dewey M. Caron (2011)

Recommended Periodicals:

- American Bee Journal (<http://americanbeejournal.com/>)
- Bee Culture (<http://www.beeculture.com/>)
- UC Davis Apiculture Newsletter (http://elninobeelab.ucdavis.edu/apiculture_newsletter.html)

Some Recommended Internet Resources:

- eXtension.org (http://articles.extension.org/bee_health)
- Honey Bees and Colony Strength Evaluation (<http://class.ucanr.edu/course/view.php?id=8>)
- Bee Informed Partnership (<https://beeinformed.org/>)

Exam Schedule (written and practical):

Test day option 1: 9/11/2016 (with review option on 9/10/2016)

Test day option 2: 9/18/2016 (with review option on 9/17/2016)

Exam Format:

Written exams will take place at the Sensory Theater at the Honey and Pollination Center in the Robert Mondavi Institute on the UC Davis campus. Examinations will begin at 9 AM and candidates will have 2 hours to complete the exam. The exam consists of multiple choice, true/false, short answer, and matching questions. No outside materials will be allowed during the written exam.

Practical exams will take place at the Harry H. Laidlaw Jr. Honey Bee Research Facility located on 1 Bee Biology Rd., Davis, CA 95618 (UC Davis campus). Candidates will sign up for 25 minute time slots for one-on-one exam with an examiner. Exam may include but it is not limited to identification of hive parts, tools, diseases/pests of honey bees, different castes, inspection of a colony, and bee marking. Candidates will be responsible for bringing their own protective gear, but all other equipment will be provided by the program.

To pass, candidates must receive a score of 75% or higher on both practical and written examinations. Practical exams will be scored upon the completion of the examination session and written exams will be scored by 5pm on the day of the examination. Candidates that do not pass the exam may retake the exam during the next exam session (TDB) for an additional examination fee of \$50.