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## **University of Florida Florida Master Beekeeper Program Requirements and General Information**

The Master Beekeeper Program (MBP) is a five year beekeeper training and certification provided by the University of Florida. One must already be a beekeeper to enter the program (please see Apprentice requirements). Entry into the program is attained by meeting the Apprentice requirements and passing the Apprentice examinations on exam day. There is no age limit for entry into the program although the examination may be too difficult for children under 12 years of age. All students must enter the program at the Apprentice Beekeeper level and no students are permitted to skip levels.

The program offers four levels of training and advancement: Apprentice Beekeeper, Advanced Beekeeper, Master Beekeeper and Master Craftsman Beekeeper. All ranks take a minimum of 1 full year to complete with the exception of Master Level, which takes 2 years. Opportunities for advancement in the program *occur on exam day*, upon meeting all the requirements for the level of advancement desired.

Examinations are held twice a year and all dates are announced in our quarterly newsletter, the Melitto Files as well as on our website, [www.UFhoneybee.com](http://www.UFhoneybee.com). Our spring examinations are held the Thursday before Bee College, during the University of Florida's Spring Break (generally, this falls in the first 2 weeks of March). Our fall examinations are held the Thursday before the annual Florida State Beekeepers Association (FSBA) Meeting (generally the last two weeks of October).

The training and examination day consists of 2 parts. In the morning (8am-12pm) we hold review lectures on important beekeeping topics and in the afternoon we hold the written and practical examinations (2pm-6pm). The exam days are when Advanced, Masters and Master Craftsman have their required documentation of public service work due in the MBP Board. Additionally, we hold award ceremonies to congratulate all those who have passed the exam at that season's respective conference; in spring we do this at the Bee College Awards Ceremony and in the fall we do this at the FSBA's banquet dinner. These award ceremonies are not required, but are encouraged and do require separate registration from the MBP registration (information is always announced on [www.UFhoneybee.com](http://www.UFhoneybee.com)).

Below is a list of requirements necessary for a candidate to fulfill in order to achieve each level in the Master Beekeeper Program. It is important that candidates read the requirements closely and make certain that that all requirements are met in order to advance in the program.

If at any point you wish to discontinue the program, please contact us directly. Please also be sure to keep us informed of your current mailing address, email address and phone number as we do use all methods to contact you for various reasons throughout your enrollment.

## I) Apprentice Beekeeper:

A: must be a Florida registered beekeeper or a registered beekeeper in home state (name must be on registration list or the name must “umbrella” an individual – ie. “Ellis Family” on the registration list would cover husband, wife, and children). Special exceptions to this rule will be considered.

B: must own at least 1 colony of honey bees for at least 1 year. Special exceptions to this rule will be considered.

C: must score a 70% or higher on a written examination. The written test *can* include but is not limited to materials covered during previous UF Bee College lectures and labs, on the FDACS-DPI Apiary website (<http://www.doacs.state.fl.us/pi/plantinsp/apiary/apiary.html>), on the UF Honey Bee Research and Extension Laboratory website (UFhoneybee.com), and books/other literature on the Apprentice Beekeeper reading list (see Appendix E).

D: must score 70% or higher on a practical examination. The practical examination *can* include but is not limited to being able to describe the physical parts of a beehive (common terms, not regional nomenclature); light and properly use a smoker; recognize the various stages of brood, different castes of bees, and find or at least describe the queen; differentiate between brood, pollen, capped honey; recognize propolis and describe its functions; describe the layout of a brood nest (placement of honey, pollen, and brood), etc.

## II) Advanced Beekeeper:

A: must have held the Apprentice Beekeeper rank at least *1 full calendar year* and have been a practicing beekeeper for at least 2 years. Also, must be a Florida registered beekeeper or a registered beekeeper in home state. Special exceptions to this rule will be considered.

B: must show proof of passing 6 computerized honey bee training modules (must score 80% or higher on each module). These will be available at participating county extension offices throughout Florida, online (at UFhoneybee.com), or by request to the UF Honey Bee Research and Extension Laboratory. They will include modules on (1) honey bee pests/parasites/pathogens, (2) honey bee anatomy and behavior, (3) pollination biology, (4) pesticides and honey bees, (5) African honey bees, and (6) honey judging.

C: must score a 70% or higher on a written examination. The written test *can* include but is not limited to materials covered during previous UF Bee College lectures and labs, on the FDACS-DPI Apiary website (<http://www.doacs.state.fl.us/pi/plantinsp/apiary/apiary.html>), on the UF Honey Bee Research and Extension Laboratory website (UFhoneybee.com), Melitto File Articles, and books/other literature on the Advanced Beekeeper reading list (see Appendix E). This examination will cover more information than that required at the Apprentice Beekeeper level. The testable material will closely adhere to information taught in the computerized honey bee training modules (“B” above).

D: must score 70% or higher on a practical examination. The practical examination can include but is not limited to: identifying pests, parasites and pathogens, reading pesticide labels and determining which is the safest to use around bees; identifying several beekeeping items; examining honey labels for errors; distinguishing between bees, wasps, hornets, etc.; and identifying anatomical structures of a bee, flower, etc.

E: must perform *and be able to document participation* in 5 public service credits (see Appendix A). The Public Service Credit Documentation Form is only a *supporting* document and should not be the *only* evidence of a completed PSC.

### III) Master Beekeeper:

A: must have held the Apprentice and Advanced Beekeeper ranks 1 year each and have been a practicing beekeeper for at least 3 years. Also, must be a Florida registered beekeeper or a registered beekeeper in home state. Special exceptions to this rule will be considered.

B: must *demonstrate/document* 10 additional public service credits *beyond that required for the Advanced Beekeeper level* (see Appendix A).

C: choose and *declare* major (see Appendix C) and *demonstrate/document* expertise in 3 of 10 credits within the major. We refer to these as "*major credits*".

D: must *demonstrate/document* expertise in 5 credits outside your major. We refer to these as "*core credits*". Firstly, these core credits can be chosen from Appendix B. In addition to this, you may choose credits from other majors to fulfill your core credits.

E: must score 70% or higher on a written examination. The written examination can include but is not limited to materials covered during previous UF Bee College lectures and labs, on the FDACS-DPI Apiary website, on the UF Honey Bee Research and Extension Laboratory website, and books/other literature on the Master Beekeeper reading list.

### IV) Master Craftsman Beekeeper:

A: must have held the Master Beekeeper rank at least 2 years and have been a beekeeper at least 5 years. Also, must be a Florida registered beekeeper or a registered beekeeper in home state. Special exceptions to this rule will be considered.

B: must have 15 additional public service credits beyond that required for a Master Beekeeper (see Appendix A). "Extra" public service credits obtained while certifying for the Master Beekeeper Level cannot be applied to the 15 total public service credits needed to achieve Master Craftsman Status.

C: must satisfy 5 additional new credits toward your declared major (for a total of 8 credits toward major – 3 credits were completed in the Master Beekeeper level). We refer to these as "*major credits*". If student changes major, he/she must re-declare new major with the MBP board or advisors, and still satisfy 8 total credits toward new major unless previously acquired credits overlap with new major.

D: must demonstrate expertise in 8 additional new credits outside your major (for a total of 13 credits outside major – 5 credits were completed in the Master Beekeeper level). We refer to these as "*core credits*". Firstly, these credits can be chosen from Appendix B. In addition to this, you may choose credits from other majors to fulfill your core credits.

E: must demonstrate communication skills (see Appendix D)

F: must pass an oral examination. Nominee is tested by at least three individuals on the review board. The candidate is tested on one specific area of his or her choice (major) as well as on general knowledge of those areas related to honey bees and beekeeping.

G: must participate substantially in a UF (or other university), FDACS-DPI, or USDA sponsored research or extension project

## APPENDIX A

### Public Service Credit Requirements (for the Advanced, Master, and Master Craftsman Levels)

Candidates for the Advanced Beekeeper rank or higher *must document* a certain number of public service credits. “Public service” is defined as volunteer service or educational activity oriented around bees and beekeeping and conducted for the benefit of the public (*non-beekeeping audience*). Educational activities in conjunction with commercial ventures generally do not qualify (i.e. selling honey).

One Public Service Credit (PSC) equals a single, *documented* event of a qualified public service. Multiple repetitions of a particular activity may count, but only if they involve separate events or invitations. For example, two presentations to fifth grade science classes may qualify as 2 PSCs but not if they are two successive class periods on the same day.

*The key to PSCs is adequate documentation of the event.* Primary documentation is represented by original media: conference programs, testimonial letters from third parties, newspaper clippings, photographs, or video recordings. Secondary documentation may lack material evidence of the activity, but must at least include a written statement with the title of the event, date, place, time topic, target clientele group and number attended, description of the activity, and its outcome. In general, documentation must be material evidence, in writing; and more detail is better than less. Board Members reserve the right to accept or reject documentation during program audits. *Candidates for Advanced Beekeeper must present documentation to the Master Beekeeper Program Board prior to taking the written examination. We provide a documentation form for your use at [UFhoneybee.com](http://UFhoneybee.com). Click on the MBP logo, and then “[Download documentation form for Public Service Credits](#)”.*

The following activities are pre-approved for satisfying PSC requirements. Other activities may be admissible, but candidates are advised to contact program officers about specific cases.

- 1) Presenting bee-related lecture or workshop to non-beekeeping group (youth or adult)
- 2) Officership in local beekeeping association
- 3) Assisting members of youth organizations (4-H, Scouts, FFA), etc. with project work.
- 4) Mentoring a new beekeeper through at least one complete season.
- 5) Public demonstration on beekeeping topic at fair, festival or similar public event.
- 6) Providing a hive of bees to pollinate a public garden.
- 7) Establishing and maintaining observation hive for school or civic group.
- 8) Designation by local County Extension office or other municipal agency as expert contact on bee-related questions or issues (see points below).
  - MBP participant must contact their county agent *and* the MBP board to offer their expertise
  - Must have scored an average of 80 on most recent practical & written exams (you should contact the HBREL for confirmation and we will forward scores to your agent)
  - Must be a beekeeper in the county for which extension office appoints them expert (counties may have multiple experts)
  - Must follow BMPs for keeping European colonies ( have inspector document your participation)
  - Must provide a clear channel of communication open to the county, agent and public (eg; hotline, email, social media, etc).
  - Must receive positive evaluation from county extension agent stating: dates of service, value of performance to the office, approximate time dedicated to position, and any additional comments

## APPENDIX B

### Core Credits

Core Credit Requirements – Advanced Beekeepers must document completion of 5 credits *outside* their major before they can be considered for advancement to the Master Beekeeper Level. Master Beekeepers must complete an *additional* 8 core credits for a grand total of 13 core credits to qualify for Master Craftsman Level. You can choose any of the following credits *not in your declared major* to fulfill this requirement. In addition to this, you may choose credits from other majors to fulfill your core credits.

- 1) Winning 1<sup>st</sup> or 2<sup>nd</sup> place in an authorized competition in: extracted honey
- 2) comb or cut-comb honey
- 3) crystallized (spun or creamed) honey, or
- 4) beeswax
- 5) publishing article in beekeeping publication (excluding newsletters)
- 6) publishing article in a non-beekeeping publication (with at least state-wide distribution)
- 7) being recognized as a beekeeping authority in your local area by appearing on radio or TV
- 8) documenting training in life-saving treatment of persons suffering from allergic reactions to insect stings
- 9) attending at least three region (multi-state, national or international beekeeping meetings)
- 10) conducting a program or workshop at a state, regional, national or international meeting or convention
- 11) demonstrating competence in small-scale queen rearing
- 12) completing a course on artificial queen insemination
- 13) acquiring private pesticide applicator's license
- 14) documenting legally-licensed honey processing facility
- 15) participating in a beekeeping research or extension project at an approved institution
- 16) acquiring other certified bee-related training as approved by review board
- 17) serving two or more years as officer of a bee organization at state level or higher (need not be consecutive nor in the same organization)
- 18) documenting culture/maintenance of other bee species (bumble bees, halictids, etc.)

\*\*Other documentation will be considered but we recommend that you consult the review board prior to undertaking an event not on the above list.

## APPENDIX C

### Majors and Credit Requirements

*Major must be declared to the board during Master Beekeeper status.*

(Candidates MUST be able to document activities – contact review board if you have questions about any of the requirements)

Other suggested majors/requirement will be considered.

### **1) Diagnosis and treatment of honey bee pests, parasites, and pathogens**

- a) pass (with 70% or higher) a tutorial on diseases of the honey bee
- b) pass (with 70% or higher) a tutorial on pests/parasites of the honey bee
- c) present lecture on bee pests/diseases at state beekeepers meeting or higher
- d) switch to and document use of IPM (integrated pest management) in personal beekeeping operation
- e) serve as “local expert” and assist other beekeepers in proper disease/pest diagnosis in their colonies.
- f) acquire a pesticide applicator license
- g) create reference collection (sterile) of bee pests and diseases
- h) research and review 1 pest or disease of honey bees. The review will be published on the HBREL’s website. The written review must be accompanied by a power point presentation.
- i) pass (70% or higher) a practical (hand’s on) examination of bee pests/diseases
- j) attend 3 training workshops on bee pests/diseases (must be able to document)

### **2) Pollination ecology and bee botany**

- a) provide pollination services for gardener (not self) or commercial fruit/nut/vegetable grower (must be able to document)
- b) plant bee-friendly garden in public area (such as library, town square, etc.)
- c) present lecture on pollination ecology or bee botany at state beekeepers meeting or higher
- d) produce handout of local honey plants and when they bloom for local (county or region) clientele
- e) pass (70% or higher) practical examination on bee plants
- f) research and review 1 plant that is a major honey production plant in Florida. The review will be published on the Honey Bee Research and Extension Laboratory’s website. The written review must be accompanied by a power point presentation.
- g) become a certified Florida Master Gardener
- h) be trained in identifying pollen present in honey samples
- i) document work with pollinator education to the general public
- j) create museum-quality plant collection of regional honey plants

### **3) Honey judging**

- a) judge state level or higher honey shows
- b) become a certified UF Bee College Honey Judge
- c) win 1<sup>st</sup> or 2<sup>nd</sup> place in any category of state or higher level honey show
- d) document ability to produce mead
- e) pass (70% or higher) practical examination on honey judging
- f) research and review 1 type of honey important to the Florida beekeeping industry. The review will be published on the Honey Bee Research and Extension Laboratory’s website. The written review must be accompanied by a power point presentation.
- g) educate public about hive products and their uses at a fair booth or other such event
- h) show evidence that you maintain a Florida licensed honey house
- i) be trained in identifying pollen present in honey samples
- j) document knowledge (either through written examination, creating of extension bulletins, etc.) of honey production/processing and other products of the hive

### **4) Beekeeping for rural development**

- a) document knowledge (either through written examination, creation of extension bulletin, etc.) of alternative methods of queen rearing
- b) pass (70% or higher) a practical (hand’s on) examination of bee pests/diseases, including non-chemical control of these disorders

- c) document knowledge (either through written examination, creating of extension bulletins, etc.) of honey production/processing and other products of the hive, including value adding theory
- d) document proficiency in hive equipment assembly
- e) be proficient in a foreign language
- f) volunteer for Winrock, Partners of America, or other similar organization
- g) be a certified Florida Master Gardener
- h) pass (70% or higher) written examination on beekeeping for rural development
- i) win 1<sup>st</sup> or 2<sup>nd</sup> place in any category of state or higher level honey show
- j) document knowledge (either through written examination, creation of extension bulletins, etc.) of pollination ecology, general honey bee biology, and colony management for honey production

### 5) Queen production

- a) document that you are rearing queens according to FDACS-DPI best management practices (BMP's)
- b) attend instrumental insemination course
- c) pass (70% or higher) examination of mating biology and bee genetics
- d) research and review alternative queen rearing methods industry. The review will be published on the Honey Bee Research and Extension Laboratory's website. The written review must be accompanied by a power point presentation.
- e) volunteer with professional queen breeder (40 hours needed)
- f) research and review 1 race of honey bee. The review will be published on the Honey Bee Research and Extension Laboratory's website. The written review must be accompanied by a power point presentation.
- g) serve as "local expert" and assist other beekeepers queen production. Must be able to document.
- h) pass (with 70% or higher) a tutorial on Africanized honey bees
- i) must document that you have mentored/trained others in the dynamics of queen rearing
- j) must document that you are selecting for resistance traits in own queen rearing operation

### 6) African honey bees

- a) document proficiency in FABIS or USDAID bee identification methods
- b) generate African bee extension information (presentations, EDIS documents, etc.) for a specific target audience (PCOs, Master Gardeners, etc.)
- c) pass (with 70% or higher) a tutorial on Africanized honey bees
- d) pass (70% or higher) examination of mating biology and bee genetics
- e) acquire a pesticide applicator license
- f) document knowledge and participation in colony bait hive service
- g) document trip to another area having African bees. Must be able to document work with the Africanized bees while in the area.
- h) serve as "local expert" and assist other beekeepers with African bee related issues
- i) must keep personal bee colonies according to FDACS-DPI best management practices (BMP's)
- j) present lecture on African honey bees at state beekeepers meeting or higher

### 7) Advanced bee husbandry

- a) switch to and document use of IPM (integrated pest management) in personal beekeeping operation
- b) pass (70% or higher) a practical (hand's on) examination of bee pests/diseases
- c) provide pollination services for gardener (not self) or commercial fruit/nut/vegetable grower (must be able to document)
- d) plant bee-friendly garden in public area (such as library, town square, etc.)
- e) become a certified Florida Master Gardener

- f) document knowledge (either through written examination, creating of extension bulletins, etc.) of honey production/processing and other products of the hive, including value adding theory
- g) document that you are rearing queens according to FDACS-DPI best management practices (BMP's)
- h) attend instrumental insemination course
- i) document proficiency in FABIS or USDAID
- j) pass (70% or higher) examination of mating biology and bee genetics

### 8) Native bee apiculture

- a) build a native bee nest habitat for community garden or commercial fruit/nut/vegetable grower
- b) build a native bee nest habitat in a public area (such as library, town square, school, etc.)
- c) present a lecture on (1) native bee diversity or (2) how to create native bee habitats at a state, regional (multi-state), national or international beekeepers meeting
- d) produce an educational color pamphlet or brochure of local native bees for local (county or region) clientele. (all photos used must be cited and permissions granted by the photographer or copyright holder; a reference list is required)
- e) pass (70% or higher) a practical examination on bee and wasp identification
- f) research and produce a review of one species of native Florida bee. The review will be published on the HBREL's website. The written review must be accompanied by a power point presentation.
- g) participate in a university study about native bees and show documentation
- h) conduct a survey using native bee monitoring techniques and report on the local native bees present in your area with a digital photograph collection of regional bees and wasps complete with an index that provides date/location/identification information for each photo or a museum-quality insect collection of regional bees and wasps complete with collector and species identification labels
- i) document involvement with providing native bee education to the general public
- j) write an article centered around a specific native bee or around native bees in general to be published in a popular journal or magazine or for a website (i.e. EDIS document).

### 9) Apiculture education

- a) develop an original bee related educational PowerPoint presentation (check with board for topic) for a 45-minute lecture, accompanied by a script and a cover page identifying the following: target audience, accompanying resources, further reading list (all photos used must be cited and permissions granted by the photographer or copyright holder; a reference list is required)
- b) develop educational pamphlet detailing an aspect of beekeeping (extracting honey, building equipment, etc.) for distribution among *beekeepers* (all photos used must be cited and permissions granted by the photographer or copyright holder; a reference list is required)
- c) develop original educational pamphlet explaining a bee related issue that may be important for the *general public* (or a specific target audience) for distribution (all photos used must be cited and permissions granted by the photographer or copyright holder; a reference list is required)
- d) write an article about one of the following topics: education using bees, safety and beekeeping, bee related laws and regulations, bee anatomy and biology, beekeeping IPM, or other approved topic for a popular journal, magazine or newsletter (i.e. Mellitto Files)
- e) pass (70% or higher) a module on apiculture education basics
- f) attend 5 state or higher level beekeeping seminars (such as the Florida State Beekeepers Association Annual Meeting, the Annual Meeting of the American Beekeeping Federation, etc) – you must be able to document attendance
- g) develop a bee related teaching module (for beekeepers) accompanied by an evaluation tool (something with which you can judge the success of your teaching module)

- h) provide documentation of successful beekeeping mentorship (ie, the individual you are mentoring is showing clear progress due to your instruction) via self-created pre and post tests, evaluations, documented growth and progress
- i) attend educational seminars – not on bee education but on how to be an effective educator – these occur in many places; contact the program board for ideas
- j) provide documentation of participation in peer review of extension presentations by other beekeepers, accompanied by a feedback evaluation form signed by the reviewer, presenter and outreach contact.

## APPENDIX D

### Communication Skills

- Nominee must present program at state beekeeper conference. Program may be in the form of a general presentation, workshop, or similar activity.
- Nominee must complete two of the following activities:

- 1) Prepare and publish article in beekeeping journal
- 2) Prepare and publish article on bees or beekeeping in non-beekeeping publication
- 3) Be interviewed on radio or TV program regarding honey bees and/or beekeeping.
- 4) Be featured in a newspaper article regarding honey bees and/or beekeeping

## APPENDIX E

### Suggested Reading List for Apprentice Level Examinations

#### Books

- 1) Honey Bees and Beekeeping: A Year in the Life of an Apiary, 3<sup>rd</sup> Edition – Keith Delaplane (2007)
- 2) The Beekeeper’s Handbook, 3<sup>rd</sup> Edition – Diana Sammataro and Alphonse Avitabile (2006)
- 3) First Lessons in Beekeeping – Keith Delaplane (2007)
- 4) Backyard Beekeeping, Weeks Ringle – Kim Flottum (2005)
- 5) Honey Bee Biology and Beekeeping – Dewey Caron (2000)

#### Periodicals

- 1) American Bee Journal
- 2) Bee Culture

### Suggested Reading List for Advanced Level Examinations (in *addition* to those listed for the Apprentice Level Examination)

#### Books

- 1) The Hive and the Honey Bee – Dadant and Sons, Inc. (1992)
- 2) ABC & XYZ of Bee Culture – A.I. Root, (2007)
- 3) Honey Bee Pests, Predators, and Diseases, 3<sup>rd</sup> Edition – A.I. Root (Morse and Flottum, eds.) (1998)
- 4) The Biology of the Honey Bee – Mark Winston (1991)
- 5) Crop Pollination by Bees – Keith Delaplane and Daniel Mayer (2000)

## Websites

- 1) All “honey bee” entries (search for “honey bee”) at: <http://edis.ifas.ufl.edu/>
- 2) Honey Bee Research and Extension Laboratory website: [Ufhoneybee.com](http://Ufhoneybee.com)
- 3) Florida Department of Agriculture and Consumer Services – Division of Plant Industry, Apiary Section  
Website: <http://www.doacs.state.fl.us/pi/plantinsp/apiary/apiary.html>
- 4) The University of Florida AFBEE website: [AFBEE.com](http://AFBEE.com)

## University of Florida Master Beekeeper Program Board Members:

Mr. Brad Burbaugh, County Extension Agent, Duval County

Mr. Jerry Hayes, Chief of Apiary Inspection, Florida Department of Agriculture and Consumer Services

Dr. Bill Kern, Department of Entomology and Nematology, University of Florida

Mr. Ray Zerba, County Extension Agent, Clay County

Dr. Jamie Ellis, Department of Entomology and Nematology, University of Florida



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