



Florida Master Beekeeper Program Requirements¹

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The Florida Master Beekeeper Program is a beekeeper training and certification program provided by the University of Florida. The program offers four levels of training and advancement: Apprentice Beekeeper, Advanced Beekeeper, Master Beekeeper, and Master Craftsman Beekeeper. In order to obtain certification in each level, the previous level examinations and requirements must be completed successfully.

The Master Beekeeper Program is administered by a program board. Members of the board provide training for students in the program, produce educational materials used in the program, create and administer certification exams, as well as oversee all logistical components of the program. The program board includes:

- Mr. Brad Burbaugh, Duval County Extension Service
- Ms. Catherine Zettel Nalen, Department of Entomology and Nematology, University of Florida

- Mr. Jerry Hayes, Apiary Inspection Section, Florida Department of Agriculture and Consumer Services, Division of Plant Industry
- Dr. Bill Kern, Department of Entomology and Nematology, University of Florida
- Mr. Ray Zerba, Clay County Extension Service
- Dr. Jamie Ellis, Department of Entomology and Nematology, University of Florida

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 all requirements are met in order to advance in the program.

Note – There is no minimum age requirement for Apprentice Beekeeper eligibility, however, examinations 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.

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Apprentice Beekeeper Requirements:

A) Candidates must be a registered beekeeper in Florida or a registered beekeeper in their home state, even if registration in that state is not mandatory. If the home state does not offer colony registration, then adherence to this rule is not obligatory. The candidates name must be on the registration list or the name must “umbrella” an individual – i.e. “Smith Family” on the registration list could cover husband, wife, and children. In Florida, hives should be registered with the Florida Department of Agriculture and Consumer Services (<http://www.doacs.state.fl.us/pi/plantinsp/apiary/apiary.html>).

B) Candidates must own or have owned at least one colony of honey bees for at least one year some time prior to taking the certification exams and at least one colony must be owned by the candidate at the time certification exams are administered. This means that a candidate for certification may have kept bees for at least one year at some time in the past (for example, five years earlier) *provided* that they own and manage a colony of bees when they take the certification exams (regardless of the length of time the new colony is owned).

C) Candidates 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; information on the FDACS-DPI Apiary website (<http://www.doacs.state.fl.us/pi/plantinsp/apiary/apiary.html>); information found on the UF Honey Bee Research and Extension Laboratory website (<http://UFhoneybee.com>); information found on the African Bee Extension and Education Program website (<http://AFBEE.com>); and literature found on the Apprentice Beekeeper reading list (Appendix D). Exams are offered twice yearly: once immediately before the fall meeting of the Florida State Beekeepers Association (<http://www.floridabeekeepers.org>) and once immediately before the University of Florida Bee College in spring (<http://UFhoneybee.com>).

D) Candidates must score 70% or higher on a practical examination. The practical exam can include, but is not limited to: describing the physical parts of a beehive (common terms, not regional nomenclature); igniting and properly using a smoker; recognizing the various stages of brood, differentiating castes, and finding (or at least describing) the queen; differentiating between brood, pollen, and capped honey cells; recognizing propolis and describing its functions; and describing the layout of a brood nest (placement of honey, pollen, and brood), etc.

Advanced Beekeeper Requirements

A) Candidates for this rank must have held the Apprentice Beekeeper rank at least one year and have been a practicing beekeeper for at least two years. Additionally, the candidate must be a Florida registered beekeeper or a registered beekeeper in their home state.

B) Candidates *must show* proof of passing six (6) computerized honey bee training modules with a score of 80% or higher. These will be available at participating County Extension offices throughout Florida (<http://www.ifas.ufl.edu>), online at <http://UFhoneybee.com> (click on “Extension” and then “Master Beekeeper Program”), or by request from the UF Honey Bee Research and Extension Laboratory. The modules focus on (1) honey bee pests/parasites/pathogens, (2) social wasps and bees, (3) pollination biology, (4) pesticides and honey bees, (5) Africanized honey bees, and (6) honey judging.

C) Candidates must score 70% or higher on a written examination. The written exam can include, but is not limited to: materials covered during previous UF Bee College lectures and labs, information on the FDACS-DPI Apiary website, the UF Honey Bee Research and Extension Laboratory website, and the AFBEE website, and literature found on the Advanced Beekeeper reading list (see Appendix D). This examination will cover more information than that required for the Apprentice Beekeeper level. The exams will include information taught in the computerized honey bee training modules (“B” above).

D) Candidates must score 70% or higher on a practical examination. The practical exam can include, but is not limited to: scoring a jar of show honey, 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 the anatomical structures of a bee and a flower.

E) Candidates must perform and *document* completion of five (5) public service credits (Appendix A) with the provided service credit documentation form. A candidate can, and is encouraged to, complete and submit more than five public service credits prior to taking the Advanced Beekeeper examinations but the “extra” credits cannot be used toward satisfying credit requirements in higher program levels.

Master Beekeeper Requirements

A) Candidates must have held the Apprentice and Advanced Beekeeper ranks for one year each and have been a practicing beekeeper for at least three years. Additionally, the candidate must be a Florida registered beekeeper or a registered beekeeper in their home state.

B) Candidates must demonstrate and document 10 additional public service credits *beyond those* required for obtaining the Advanced Beekeeper level (Appendix A). “Extra” public service credits obtained during the Advanced Beekeeper level cannot be used to satisfy public service credit requirements in the Master Beekeeper level.

C) Candidates must choose and declare a major (see Appendix B) and *demonstrate/document* expertise in three (3) of 10 credits within the declared major. To do this, pick a major you are most comfortable undertaking. To become a Master Beekeeper, you will need to document completion of three credits *within* your major. “Double majors” are not allowed.

D) Candidates must *demonstrate/document* expertise in five (5) “core” credits *outside* your major (see Appendix B). For example, if you major in “Diagnosis and treatment of honey bee pests,

parasites, and pathogens”, then you can acquire the extra core credits in other majors like “Honey Judging”, “Pollination ecology and bee botany”, etc. Additionally, we list in Appendix B additional credits that can be counted as core credits, though they are not tied to any one major. Extra credits achieved during the course of your training can carry over to the next level. For example, completing 6 core credits for your advanced certificate allows one credit to be applied toward your Master certificate since only five are required. This new requirement replaces the former “practical documentation” requirement.

E) Candidates 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, the FDACS-DPI Apiary website, the UF Honey Bee Research and Extension Laboratory website, the AFBEE website, and literature found on the Master Beekeeper reading list (Appendix D).

Master Craftsman Beekeeper

A) Candidates must have held the Master Beekeeper rank for at least two years and kept bees at least five years. Additionally, the candidate must be a Florida registered beekeeper or a registered beekeeper in their home state.

B) Candidates must have 15 credits of public service work *beyond those* required for a Master Beekeeper (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) Candidates must satisfy five (5) additional credits toward their major (for a total of eight (8) credits toward major – three [3] credits were completed in the Master Beekeeper level) (Appendix B). If a student changes his major, he must satisfy eight (8) total credits toward the new major unless previously acquired credits overlap with the new major. Extra credits obtained while certifying for the Master Beekeeper level can be applied to the eight total major credits needed to achieve Master Craftsman status.

D) Candidates must demonstrate expertise in eight (8) additional core credits *outside their major* and beyond that required for a Master Beekeeper (see Appendix B). This new requirement replaces the former “practical documentation” requirement.

E) Candidates must demonstrate and *document* communication skills (Appendix C).

F) Candidates must pass an oral examination. The candidate is tested by at least three individuals from the Master Beekeeper program board. The candidate will be tested on one specific area of his or her choice (major) as well as general knowledge about honey bees and beekeeping. Additionally, the candidate must present a 30 minute PowerPoint presentation to the program board. The presentation topic will be assigned by the program board. Please contact a member of the program board before preparing for the presentation.

G) Candidates must participate substantially in a UF (or other university), FDACS-DPI, or USDA sponsored research or Extension project. Please contact the Master Beekeeper program board when considering a research or Extension project.

APPENDIX A: Public Service Requirements for the Advanced, Master, and Master Craftsman Levels

Candidates for the Advanced Beekeeper rank and 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 *general public*. Educational activities in conjunction with commercial ventures or beekeeper meetings generally do not qualify. Additionally, if your **intended audience** is beekeepers, credits will not apply even if the general public participates.

One public service credit 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 two public service credits, but the presentations cannot be the same and must be

given to a different audience for both times (giving four successive presentations to four class periods will not count as four separate credits if the presentations are the same). If a candidate has any question about whether or not a specific activity will count toward a public service credit, he/she is encouraged to contact the Master Beekeeper Program Board.

In order to receive credit for a public service, the event **must be documented**. Primary documentation is represented by completion of the below form or 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. Program directors reserve the right to accept or reject documentation during program audits. ***Candidates for Advanced, Master, and Master Craftsman Beekeeper ranks must present documentation to the Master Beekeeper Program board prior to taking the written examination. We provide a documentation form below.*** The following activities are pre-approved for satisfying public service credit requirements. Other activities may be considered, but candidates are advised to contact program board members about specific cases.

- 1) Present a bee-related lecture or workshop to a non-beekeeping group (youth or adult).
- 2) Hold an office in a local beekeeping association.
- 3) Appointment by a local County Extension office or other municipal agency as an expert contact on bee-related questions or issues.
- 4) Assist members of youth organizations (4-H, Scouts, FFA, etc.) with project work.
- 5) Mentor a new beekeeper through at least one complete year.



Candidate should retain completed form to turn in on day of exam.

Documentation of Public Service Credits

University of Florida Master Beekeeper Program

(to be completed with assistance from Master Beekeeper Program candidate and signed by representative from organization sponsoring/hosting the event)

On this date: _____, (name) _____, a candidate for the University of Florida's Master Beekeeper Program, provided or completed an act of public service, which covered the following subject matter related to beekeeping, honey bee pollination, or honey production:

(Please circle applicable areas)

- 1. Presenting bee-related lecture or workshop to non-beekeeping group
- 2. Officership in local beekeeping association
- 3. Appointment by local County Extension office or other municipal agency as expert contact on bee-related questions or issues
- 4. Assisting members of youth organizations with project work
- 5. Mentoring a new beekeeper through at least one complete season.
- 6. Public demonstration on beekeeping topic at fair, festival or similar public event
- 7. Providing a hive of bees to pollinate a public garden.
- 8. Establishing and maintaining observation hive for school or civic group.
- 9. Other: _____

Organization name: _____

Name of Event: _____ Date: _____

General Description of Event: _____

Estimated number of participants/attendees _____

Printed Name/Title of Representative: _____

Signature of Representative: _____

Contact Information (phone and/or email) for Signee: _____

6) Give a public demonstration on a beekeeping topic at a fair, festival, or similar public event.

7) Provide a hive of bees to pollinate a public garden.

8) Establish and maintain an observation hive for a school, civic group, museum, etc.

APPENDIX B

The following credits may be considered as core credits *outside* one's given major (ie. completion of these credits does not count toward the credit requirement within one's major but rather towards the credit requirements *outside* of one's major):

1) Publish an article in beekeeping publication (excluding newsletters)

2) Publish an article in a non-beekeeping publication (with at least statewide distribution)

3) Recognition as a beekeeping authority in your local area by appearing on radio or TV

4) Attend at least three regional or higher meetings (multi-state, national or international beekeeping meetings)

5) Conduct a program or workshop at a state, regional, national or international meeting or convention

6) Participate in a beekeeping research or Extension project at an approved institution

7) Acquire other certified bee-related training as approved by review board

8) Serve two or more years as officer of a bee organization at state level or higher (need not be consecutive nor in the same organization)

Majors and Requirements

Candidates **MUST** be able to document activities. Candidates are free to suggest other majors/requirement not listed below to the program board.

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 a lecture on bee pests/diseases at a state beekeepers meeting or higher.

d) Switch to and document the use of IPM (integrated pest management) in your personal beekeeping operation.

e) Serve as a "local expert" and assist other beekeepers in proper disease/pest diagnosis in their colonies.

f) Acquire a personal pesticide applicator license.

g) Create a reference collection (sterile) of bee pests and diseases. Please contact the honey bee lab for proper sterilization techniques.

h) Research and write a review of one pest or disease of honey bees. The review will be published on the Honey Bee Research and Extension Laboratory's website. The written review must be accompanied by a PowerPoint presentation.

i) Pass (70% or higher) a practical examination of bee pests/diseases.

j) Attend three (3) training workshops on bee pests/diseases.

2) Pollination Ecology and Bee Botany

a) Provide pollination services for a gardener (not self) or a commercial fruit/nut/vegetable grower.

b) Plant a bee-friendly garden in a public area (library, town square, etc.).

c) Present a lecture on pollination ecology or bee botany at a state or higher level beekeepers meeting.

d) Produce a handout of local honey production plants and when they bloom for local (county or region) clientele.

e) Pass (70% or higher) a practical examination on bee-friendly plants.

f) Research and review one 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) Receive training in the identification of pollen presence in honey samples

i) Document work with pollinator education to the general public.

j) Create a museum-quality plant collection of regional honey production plants.

k) Create a honey bee photo library of 10 original photos of honey bees on plants (please be sure all plants are identified correctly before submitting).

l.) Document culture/maintenance of other bee species (bumble bees, mason bees, etc.)

3) Honey Judging

a) Judge a state level or higher honey show.

b) Obtain certification as a Welsh Honey Judge (offered annually at the UF Bee College).

c) Win 1st or 2nd place in any category of a state or higher level honey show.

d) Document an ability to produce mead.

e) Pass (70% or higher) a practical examination on honey judging.

f) Research and review one 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 PowerPoint presentation.

g) Educate the public about hive products and their use at a fair booth or other such event.

h) Provide documentation for maintaining a Florida-licensed honey house.

i) Obtain training in the identification of pollen presence in honey samples.

j) Document knowledge (through written examination, creating of Extension bulletins, etc.) of honey production/processing and other products of the hive.

k) Document a legally-licensed honey processing facility.

4) Beekeeping for International Rural Development

a) Document knowledge (through written examination, creation of Extension bulletin, etc.) of alternative methods of queen rearing.

b) Pass (70% or higher) a practical examination of bee pests/diseases, including non-chemical control of these disorders.

c) Document knowledge (either through written examination, creating 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) Show proficiency in a foreign language.

f) Volunteer for FAVACA, Winrock, Partners of America, or other similar organizations.

g) Become a certified Florida Master Gardener.

h) Pass (70% or higher) a written examination on beekeeping for rural development.

i) Win 1st or 2nd place in any category of a state or higher level honey show (this demonstrates experience in quality control, which can then be applied to rural honey production).

j) Document knowledge (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) for rearing European queens.

b) Attend an instrumental insemination course.

c) Pass (70% or higher) an examination of mating biology and bee genetics.

d) Research and write a review on alternative queen rearing methods. The review will be published on the Honey Bee Research and Extension Laboratory's website. The written review must be accompanied by a PowerPoint presentation.

e) Volunteer at least 40 hours with a professional queen breeder.

f) Research and write a review on one 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 a “local expert” and assist other beekeepers with queen production

h) Pass (with 70% or higher) a tutorial on Africanized honey bees.

i) Mentor/train others in the dynamics of queen rearing.

j) Select for resistance traits in your own queen rearing operation.

k.) Demonstrate competence in small-scale queen rearing.

6) Africanized Honey Bees

a) Document proficiency in FABIS or USDAID bee identification methods.

b) Generate Africanized bee Extension information (presentations, EDIS documents, etc.) for a specific target audience (Pest Control Operators, Master Gardeners, etc.).

c) Pass (with 70% or higher) a tutorial on Africanized honey bees.

d) Pass (70% or higher) an examination of mating biology and bee genetics.

e) Acquire a restricted use pesticide license.

f) Document knowledge and participation in a colony bait hive service.

g) Visit another area affected by Africanized bees (southwestern U.S., Central/South America, etc.). You must be able to document work with the Africanized bees while in the area.

h) Serve as a “local expert” and assist other beekeepers with Africanized bee related issues.

i) Must keep personal bee colonies according to FDACS-DPI best management practices (BMP's).

j) Present a lecture on Africanized honey bees at a state level or higher beekeeper meeting.

k) Document attendance of an African Honey Bee Training for Pest Control Operators workshop (must be at least 2.5 hours long).

l.) Document attendance at an African Honey Bee Training for First Responders workshop (must be at least 2.5 hours long).

7) Advanced Bee Husbandry

a) Switch to and document the use of IPM (integrated pest management) in your personal beekeeping operation.

b) Pass (70% or higher) a practical examination of honey bee pests/diseases.

c) Provide pollination services for a gardener (not self) or a commercial fruit/nut/vegetable grower.

d) Plant a bee-friendly garden in a public area (library, town square, etc.).

e) Become a certified Florida Master Gardener.

f) Document knowledge (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 an instrumental insemination course.

i) Document proficiency in FABIS or USDAID bee identification methods.

j) Pass (70% or higher) an examination on mating biology and bee genetics.

APPENDIX C: Communication Skills

1) Candidate must present a program at a state beekeeper conference. Program may be in the form of a general presentation, workshop, or similar activity. A Master Beekeeper Program Board member must be present at the presentation.

2) Candidate must complete two of the following activities:

- a) Prepare and publish an article in a beekeeping journal.
- b) Prepare and publish an article on bees or beekeeping in a non-beekeeping publication.
- c) Be interviewed on the radio or a television program regarding honey bees and/or beekeeping.
- d) Be featured in a newspaper article regarding honey bees and/or beekeeping.

APPENDIX D

Suggested Reading List for Apprentice Level Examinations

Books:

1) Honey Bees and Beekeeping: A Year in the Life of an Apiary, 3rd Edition – Keith Delaplane (2007)

2) The Beekeeper's Handbook, 3rd 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, 3rd 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: <http://www.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: <http://www.AFBEE.com>