

South Carolina Master Beekeeper Program MANUAL

Certified Beekeeper

Journeyman Beekeeper

Master Beekeeper

Master Craftsman Beekeeper

South Carolina Beekeepers Association



Building

One

Beekeeper

at a time

**Master
Beekeeper Program**

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Overview of the Master Beekeeper Program

The Master Beekeeper Program (MBP) is a training and certification program administered and provided by the South Carolina Beekeepers Association (SCBA). The program recognizes the education and experience obtained by participating beekeepers, and certifies their expertise through a series of training, examinations, service credits, and a final research project (see the summary of requirements in Table 1). Program participants must join and maintain membership with the SCBA. There is no age limit for entry into the program although the examinations may be too difficult for children under 12 years of age. All candidates must enter the program at the Certified Beekeeper Level and are not permitted to skip levels. Beginning level certifications obtained in other states may be considered by the MBP Committee for entry into the program. No reciprocal certifications will be issued based on achievement in other programs. Please see [APPENDIX H Reciprocal Certification Recognition Policy](#) for complete Reciprocity Policy.

The SCBA Master Beekeeper Program offers four levels of training and certification:

1. Certified Beekeeper (beginner or entry level),
2. Journeyman Beekeeper (intermediate level),
3. Master Beekeeper (advanced level),
4. Master Craftsman Beekeeper (expert level).

The Certified level requires one year of beekeeping to complete. The Journeyman level requires a minimum of 1 full year at the Certified level to complete (minimum of 2 years total experience). The Master level requires 2 years as a Journeyman level beekeeper and the Master Craftsman level requires an additional 2 years beyond the Master level. A minimum of six years of active participation in the program is required to advance from the Certified level to the Master Craftsman level. Participants must meet all the requirements for each level before advancing to the next tier.

The foundation of the training and examination consists of two parts at the Certified Level: a written and a practical examination. Public Service Credits, Core Minor Credits, and a Lab and Field Practical are added to the testing at the Journeyman Level. Core Major and Minor Credits, an Oral Exam, and Practical Field exam are added at the Master Level. Communication Skills, an Oral Presentation, and a Research Project are added at the Master Craftsman Level. Each beekeeper is encouraged to compile the required components for the level desired in a personal Beekeeping Portfolio [APPENDIX G Portfolio Documentation Guidelines](#) to be submitted to the MBP Committee for review prior to testing. Please see [APPENDIX F Examinations and Fees](#) for examination information.

The requirements to achieve each level of the SCBA Master Beekeeper Program are listed in detail on the following pages. It is important that candidates read the requirements closely and make certain that all requirements are met to advance in the program. Additional Program stipulations are listed in the Appendixes with necessary forms listed in [APPENDIX J PROGRAM FORMS](#). Adequate documentation is critical.

Certified Level Certificates will be awarded by the candidate's local club as certification is achieved. The presentation of Journeyman, Master, and Master Craftsman Certificates will be awarded at the next occurring SCBA Spring or Summer Conference. Attendance at a conference is not required to receive certification but is highly encouraged.

If at any point you need clarification or wish to discontinue the program, please contact us directly via email at MBP@scstatebeekeepers.com. Please also be sure to keep your current mailing address, email address, and phone number updated on your member profile at www.scstatebeekeepers.com as we do use all methods to contact you for various reasons throughout your enrollment in the SCBA Master Beekeeper Program.

Table 1: Summary of Requirements needed to achieve each level in the South Carolina Master Beekeeping Program

| | SCBA Member | Written Exam | Practical Exam | Oral Exam | Public Service Credits | Major Core Credits | Minor Core Credits | Research Project |
|-------------------------|-------------|--------------|----------------|----------------------------------|------------------------|--------------------|--------------------|------------------|
| CERTIFIED | X | X | X | | | | | |
| JOURNEYMAN | X | X | Lab and Field | | 5 | (DECLARE) | 3 | |
| MASTER | X | X | Field | X | 10 | 3 | 5 | (SELECT) |
| MASTER CRAFTSMAN | X | | | X Communicati on Skills | 15 | 5 | 8 | X |

Total Credits Earned: 30 8 16 1

Requirements for Each Level: (click the link below to go to that section)

[CERTIFIED Level Beekeeper:](#)

[MASTER Level Beekeeper:](#)

[JOURNEYMAN Level Beekeeper:](#)

[MASTER CRAFTSMAN Level Beekeeper](#)

CERTIFIED Level Beekeeper:

- A. Must be a current member of the South Carolina Beekeepers Association.
- B. Must own or manage at least 1 colony of honey bees for a minimum of 1 year.
- C. Must score an 80% or higher on the written examination (see [APPENDIX F Examinations and Fees](#)). The written test may include but is not limited to material covered in the Certified Level Study Guide, presentations during certified classes, and books/other literature on the Certified Beekeeper Reading List (see [APPENDIX A Suggested BEEKEEPING READING LIST](#)).
- D. Must score a “PASS” on the practical examination administered by a certified Journeyman, Master, or Master Craftsman Beekeeper that maintains current membership with SCBA in good standing. The practical examination may include but is not limited to being able to describe the physical parts of a beehive (common terms); 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.

JOURNEYMAN Level Beekeeper:

- A. Must be a current South Carolina Beekeeping Association Member.
- B. Must own or manage at least 1 colony of honey bees for a minimum of 2 years.
Must have held the Certified Beekeeper level for at least 1 full calendar year and should have been a practicing beekeeper for a minimum of 2 years with 1 year after the completion of the Certified Level.
- C. Must perform and be able to document participation in 5 Public Service Credits (see [APPENDIX B Public Service Credit Requirements](#)). Two items of supporting documentation are required for EACH Public Service Credit. The Public Service Credit Documentation Form is only a supporting document and should not be the only evidence of a completed PSC. All PSCs are to be submitted prior to testing.
- D. Must select and perform 3 of the activities listed in the Major/Minor Core Credits for the level of Master Beekeeper (see [APPENDIX C Major Core Credit Requirements](#) and [APPENDIX D Minor Core Credits](#)). These will be applied as Minor Credits and may not be applied a second time to an application to the Master level. All credits are to be submitted prior to testing.
- E. Must score 80% or higher on the written examination (see [APPENDIX F Examinations and Fees](#)). The written test *may* include but is not limited to material covered on the Certified Level, material covered in the Journeyman Study Guide (located in the SCBA Member Resources), presentations in Journeyman classes, and books/other literature on the Journeyman Beekeeper Reading List (see

[APPENDIX A Suggested BEEKEEPING READING LIST](#)) . This examination will cover more information than is required at the Certified Beekeeper Level.

F. Must score 80% or higher on a Practical Exam which includes both a lab practical and field practical. The lab practical examination will be administered by the MBP Committee at the annual Spring and Summer Conferences. Content may 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 beekeeping items; examining honey labels for errors; distinguishing between bees, wasps, hornets, etc.; identifying anatomical structures of a bee, flower, etc.; honey removal/extraction; judging honey for competition; and/or demonstrating basic intermediate beekeeping skills. The Field practical will consist of submitting a video on either Honey Extraction or Varroa Assessment.

[APPENDIX F Examinations and Fees](#) for more details.

MASTER Level Beekeeper:

- A. Must be a current South Carolina Beekeeping Association Member.
- B. Must have held the Journeyman Beekeeper level 2 years and should have been a practicing beekeeper for a minimum of 4 years.
- C. Must demonstrate/document 10 additional Public Service Credits beyond that required for the Journeyman Beekeeper level (see [APPENDIX B Public Service Credit Requirements](#)). Two items of supporting documentation are required for EACH Public Service Credit. The Public Service Credit Documentation Form is only a supporting document and should not be the only evidence of a completed PSC. All PSCs are to be submitted prior to testing.
- D. Declare a Core Major (see [APPENDIX C Major Core Credit Requirements](#) and demonstrate/document expertise in 3 credits within that declared major. We refer to these as "**major core credits**." All credits are to be submitted prior to testing.

It is expected that candidates both document and provide content to demonstrate a reasonable amount of effort in their Major/Minor Core Credits to the MBP Committee. Major/Minor Core Credits should reflect substantially more demonstration of the candidate's knowledge of the material. Example: It is not enough to document that you presented a lecture, provided a service, or attended an event. Your documentation of core credits should, whenever possible, document any content provided and reflect your mastery of the content.

- E. Must demonstrate/document expertise in 5 Core Credits outside your major. We refer to these as "**minor core credits**." These credits may be chosen from [APPENDIX D Minor Core Credits](#) OR from other majors (other than the declared major) to fulfill the core credits requirement. A single submission

may only be counted ONCE and may not receive dual credit within multiple areas (PSC, Major/Minor Core credits, or credits earned on the Journeyman Level). All credits are to be submitted prior to testing.

F. Must score 80% or higher on a written examination (see [APPENDIX F Examinations and Fees](#)) administered by the MBP Committee. The written examination *may* include but is not limited to material covered on previous levels, material listed in the Master Study Guide (located in the SCBA Member Resources), presentations from previous levels and/or advanced lecture series, plus books/other literature on the Beekeeper Reading List (see [APPENDIX A Suggested BEEKEEPING READING LIST](#)).

G. Must pass a Practical Field Hive Assessment conducted by three Master Beekeepers or Apiculture Experts approved by the SCBA MBP Committee scoring an 80% or higher by two examiners. Hive assessment exams will only be conducted at SCBA Summer Conferences. The candidate is required to give written notice to the SCBA MBP Director of his/her desire to test no later than June 1st in order to ensure the availability of an expert review board.

H. Must pass an oral examination conducted by three Master level or beekeeping academics approved by the SCBA MBP Committee scoring an 80% or higher by two of the three examiners. Oral exams will only be conducted at SCBA Summer Conferences. The candidate is required to give written notice to the SCBA MBP Director of his/her desire to test no later than June 1st to ensure the availability of an expert review board. The oral exam will consist of a prepared question that will be given to the candidate at least 14 days prior to the exam and then 3 impromptu questions asked during the exam. Early written notice of a candidate's desire to test is encouraged and of benefit to the candidate as it provides the candidate opportunity to adequately prepare.

Prior to written and oral testing: Candidates are required to send digital copies of Public Service Credit Forms and Major/Minor Core Credit Forms to the Master Beekeeping Program Director prior to testing. The MBP Director will share the candidate's submission with the MBP Committee and after review, the candidate will receive feedback. Completed hardcopy portfolios including supporting documentation for ALL credits earned should be brought to the testing site at the time of testing for submission and final review by the MBP Committee. Failure to submit a completed portfolio prior to testing may result in the postponement of testing.

I. Successful completion of any testing component (written, practical, oral) of the requirements does not have to be repeated if the candidate finishes all components within five years from the declaration of his or her intent to progress to Master level. Any Core Credits and Public Service Credits earned will remain valid for five years, pending review by the MBP Committee.

MASTER CRAFTSMAN Level Beekeeper:

- A. Must be a current South Carolina Beekeeping Association Member.
- B. Must have held the Master Beekeeper rank for at least 2 years and should have been a beekeeper at least 6 years.
- C. Must have 15 additional Public Service Credits beyond that required for a Master Beekeeper (see [APPENDIX B Public Service Credit Requirements](#)). "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. These credits must be earned following the completion of the Master Level. All credits are to be submitted prior to testing.
- D. Must satisfy 5 additional new Core 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 core credits**" (see [APPENDIX C Major Core Credit Requirements](#)). If a candidate changes major, he/she must re-declare a new major with the MBP Committee and still satisfy 8 total credits toward the new major unless previously acquired credits overlap with new major. All credits are to be submitted prior to testing.
- E. Must demonstrate expertise in 8 additional new Minor Credits outside your major (for a total of 16 minor credits outside major – 3 credits were completed in the Journeyman Level and 5 credits were completed in the Master Level). We refer to these as "**minor core credits**." These credits may be chosen from [APPENDIX D Minor Core Credits](#) OR from other majors (other than the declared major) to fulfill the core credits requirement (see [APPENDIX C Major Core Credit Requirements](#)). A single submission may only be counted ONCE for credit and may not receive dual credit within multiple areas (PSC, major/minor core credits). All credits are to be submitted prior to testing.
- F. Must demonstrate Communication Skills (see [APPENDIX E Communication Skills Applicable for Master Craftsman Level](#)). Candidate must present the Program topic to the MBP Committee for review and scheduling by March 1st prior to the SCBA Summer Conference.
- G. Must pass an oral examination. The candidate is to present his or her research project at a SCBA Conference in a breakout or plenary session with an opportunity for question/answer following the presentation. Among those attending, the MBP Committee will select Master Craftsmen and beekeeping academics and provide them with evaluation forms for assessment of the candidate's presentation. An overall averaged assessment of 80% or greater will be considered a passing oral examination. All required credits including the Research Project must be submitted PRIOR to scheduling the Oral Examination. Request for an oral exam must be made by June 1st to insure the availability of an expert review board.
- H. Must complete an approved Research Project. Please see [APPENDIX I RESEARCH PROJECT – Master Craftsman Level Only](#) for guidelines. Research Project documents are to be submitted no later than March 1st in order to ensure time for review by an expert review board as well as schedule the research presentation for the summer conference.

APPENDIX A Suggested BEEKEEPING READING LIST

CERTIFIED Level

A Certified Level Study Guide is available in the Member Resource Files on the SCBA website.

Books:

- 1) Honey Bees and Beekeeping: A Year in the Life of an Apiary, 3rd Edition – Keith Delaplane (2007)
- 2) The Beekeeper's Handbook, 4th Edition – Diana Sammataro, Alphonse Avitabile, Dewey M. Caron (2011)
- 3) First Lessons in Beekeeping – Keith Delaplane (2007)
- 4) The Backyard Beekeeper, Revised and Updated: An Absolute Beginner's Guide to Keeping Bees in Your Yard and Garden – Kim Flottum (2010)
- 5) Honey Bee Biology and Beekeeping – Dewey Caron, Lawrence Connor (Revised 2013)
- 6) Storey's Guide to Keeping Honey Bees -Richard E. Bonney, Malcolm T. Sanford (2018)
- 7) Beekeeping Tips and Techniques for the Southeast United States, Beekeeping Finance – David MacFawn (2017)

Periodicals:

American Bee Journal
Bee Culture

Videos and Webinars:

Varroa Resource: <https://honeybeehealthcoalition.org/varroa/>
eXtension Bee Health: <https://bee-health.extension.org>
Honey Bees & Beekeeping - Keith Delaplane, University of Georgia
Beginning with Bees - A. I. Root
Introduction to Beekeeping – Dadant

JOURNEYMAN Level (in addition to those listed for the Certified Level)

A detailed Journeyman Self Study Guide is available in the SCBA Member Resources Files on the SCBA website.

Books:

- 1) The Hive and the Honey Bee – Dadant and Sons, Inc. (2015)
- 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) Bee Pollination in Agricultural Ecosystems – Rosalind James and Theresa L. Pitts-Singer (2008)
- 6) The Small Hive Beetle, Aethina tumida Murray – Michael Wm Hood (2017)

MASTER Level (in addition to those listed for the previous levels)

*A detailed **Master Level Self-Study Guide** is available as a separate document located in the Members Resource section of the SCBA website. The guide will assist a Journeyman to plot out a personal course of study over a 3-year period in preparation for the various testing components of the Master Level.*

The following is a list of reading suggested as preparation for the Master Beekeeper Level of the South Carolina Master Beekeeper program. Even though this list is lengthy, it is not meant to be all-inclusive. A familiarity with the material will certainly prepare an individual for the Master level, but it will not necessarily provide all the information which is necessary for the completion of this level. These selections were made in order to present an overview of many different beekeeping and bee-related topics. The developers of the South Carolina Master Beekeeper Program do not necessarily agree with all of the information and opinions included in the various texts; however, the reading list was developed to acquaint the beekeeper with different viewpoints, so that the individual may be exposed to a representative sampling of the available literature. Some of the older selections may have information that needs to be updated to current beekeeping knowledge and practices.

All of the publications on the list are suggested readings but those marked with an asterisk (*) are highly recommended.

*Dewey M. Caron with L. J. Connor. 2013 (revised edition). Honey Bee Biology and Beekeeping. Wicwas Press. College level, most up-to-date and comprehensive combined biology and beekeeping book with excellent pest/diseases/mite coverage.

*Clarence Collison. What Do You Know? 2003, reprinted 2014. A.I. Root Company. An excellent study guide in question and answer format.

*Clarence Collison. Another Close Look. Summer 2014. A.I. Root Company. A collection from his columns in *Bee Culture* on the biology and physiology of honey bees.

*L. J. Connor. Bee Sex Essentials. 2008. Wicwas Press. Discusses queens, drones, mating and some genetics.

*L. J. Connor. Queen rearing Essentials. Wicwas Press. A companion book to *Bee Sex Essentials*. Covers grafting and raising queens.

*Dadant and Sons. 2015. The Hive and the Honey Bee. Dadant and Sons Hamilton, Illinois. 1324 pp. ISBN 0-915698-09-9. Special emphasis on the following chapters:

Chapter 1 The World's Beekeeping: Past and Present by Richard Jones

Chapter 9 Honey Bee Nutrition by Elton Herbert, Jr and Dale A. Hill

Chapter 10 Activities and Behavior of Honey Bees by Norman Gary

Chapter 15 Management for Honey Production by Keith Delaplane

Chapter 26 Crop Pollination by Gloria Degrandi-Hoffman

*Doolittle, G.M. 1889, 1899 (2008 Reprint) Scientific Queen-Rearing. Wicwas Press, Kalamazoo, Michigan, ISBN 978-1-8075-24-6.

*Maryann Frazier, D. M. Caron, D. VanEnglesdorp A Field Guide to Honey Bees and Their Maladies. AGRS-116. 2011. Pennsylvania State University Extension Publication. Excellent field guide with many photographs.

Johansen, Carl and Daniel F. Mayer. 1990. Pollinator Protection: A Bee and Pesticide Handbook. Wicwas Press, Cheshire, Conn. ISBN 1-878075-00-4. 212 pp.

Laidlaw, Harry H. Jr. and Robert Page, Jr. 1997. Queen Rearing and Bee Breeding. Wicwas Press, Cheshire, Conn, ISBN 1-878075-08-X. pp224.

Loring, Murray. 1984. Bees and the Law. Dadant and Sons, Hamilton, Illinois. 128 pp. ISBN 0-915698-07-2.

*E. Mader, M. Spivak, E. Evans. Managing Alternative Pollinators: A Handbook for Beekeepers, Growers and Conservationists. 2010. SARE Handbook 11. Natural Resource, Agriculture and Engineering Service. Available as printed book and as free Online download at:

<http://www.sare.org/Learning-Center/Books/Managing-Alternative-Pollinators>

Comprehensive coverage of all pollinators but little on honey bees. Contains information on pesticides.

*S. E. McGregor Insect Pollination of Cultivated Crop Plants. 1976. Agriculture Handbook No.496, USDA. Reprinted by A. I. Root Company. Available as printed book and as free Online download: *Insect Pollination of Cultivated Crop Plants: The First and Only Virtual Beekeeping Book Updated Continuously* with additions listed by crop and date. Search Internet for title: *Insect Pollination of Cultivated Crop Plants*.

*R. R. Sagilli, D. M. Burgett Evaluating Honey Bee Colonies for Pollination: A Guide for Commercial Growers and Beekeepers. 2011. Oregon State University PNW 623. Search Internet for title (*Evaluating Honey Bee colonies for Pollination*) and open up either the Oregon State or Washington State Universities site. Practical information on colony rental, contracts and how to evaluate colonies.

*USDA Natural Resources Conservation Service. Native Pollinators. 2005. Fish and Wildlife Habitat Management Leaflet No. 34. https://plants.usda.gov/pollinators/Native_Pollinators.pdf

*M. Vaughan, M. Shepherd, C. Kremen, S. H. Black. Farming for Bees: Guidelines for Providing Native Bee Habitat on Farms. 2004.

https://www.researchgate.net/publication/286071412_Farming_for_Bees_Guidelines_for_Providing_Native_Bee_Habitat_on_Farms

Miller, C.C. 1915. Fifty Years Among the Bees. (reprinted 1980) Molly Yes Press; New Berlin, NY, 328 pp.

Morse, Roger. 1978. Comb Honey Production. Wicwas Press, Ithaca, NY 128 pp.

*Morse, Roger. 1994. Rearing Queen Honey Bees. Wicwas Press, Chesire, Conn. ISBN 1-878075-05-5. Pp. 128.

*Morse, Roger and Kim Flottum. 1997. Honey Bee Pests, Predators & Diseases. The A.I. Root Company, Medina, Ohio, 718 pp. ISBN 0-936028-10-6. Special emphasis on the following chapters:

Chapter 3 Bacteria

Chapter 4 Protozoa

Chapter 9 Insects: Hymenoptera (Ants, Wasps, and Bees)

Chapter 14 Mites: Varroa and Other Parasites of Brood

Chapter 22 Summary of Control Methods

Ratnieks, Richard & Richard Nowogrodzki. Queen Rearing by Beekeepers in the Northeast. Information Bulletin #209, Cornell University Cooperative Extension Service, Ithaca, NY.

*Diana Sammataro and A. Avitabile. 2011 (fourth edition) The Beekeepers Handbook. Comstock Publishing Associates. A well-illustrated book with very useful options for management.

*Thomas Seeley. Honeybee Democracy. 2010. Princeton University Press. Excellent coverage of how social honey bees function as a superorganism.

Shimanuki, H., Kim Flottum, and Ann Harman. 2006. The ABC & XYZ of Bee Culture. The A.I. Root Company, Medina, Ohio, ISBN -13: 978-0-936028-22-4 and ISBN -10: 0-936028-22-X. 911 pp.

*Ian Stell. Understanding Bee Anatomy: a full colour guide. 2012. The Catford Press. Excellent color photographs and drawings of all parts and systems of a honey bee.

*U.S Dept. of Agriculture. 1980 Beekeeping in the United States. Agriculture Handbook No. 335 of the U.S. Dept. of Agriculture. 193 pp.

*von Frisch, Karl. 1993. The Dance Language and Orientation of Bees. Harvard University Press, Cambridge, Mass. ISBN 0-674-19051-3 (paperback). 566 pp.

*Webster, Thomas and Keith Delaplane. 2001. Mites of the Honey Bee. Dadant & Sons, Hamilton, Illinois. 280 pp. ISBN 0-915698-11-0. Special emphasis on the following chapters:

Chapter 15 Resistance of Honey Bees to Varroa Mites

Chapter 16 Treatment Thresholds for Varroa Mites

Chapter 17 Management of the Resistance of Varroa Mites to Acaricides

Periodicals:

Journal of Apicultural Research

Insects

Journal of Applied Entomology

APPENDIX B Public Service Credit Requirements (For the Journeyman, Master, and Master Craftsman Levels)

Candidates for the Journeyman 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 primarily for the benefit of the public (**non-beekeeping audience**), though service to the beekeeping community may be accepted. 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 requiring numerous hours of preparation and presentation. 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. **Diversification** of the activities listed on the PSC form is required. Only 2 activities per category will be considered for credit with the credits divided between service to the local bee community and the public non-beekeeping community. It may be difficult to equally quantify all the PSC activities, so the MBP Committee reserves the right to disqualify similar events in fulfillment of the PSC requirement. All PSCs are to be submitted PRIOR to testing.

The key to earning 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, and contact information for the activity organizer for verification. We provide a documentation form for your use. See [APPENDIX J PROGRAM FORMS](#).

Documentation must be material evidence, in writing; and more detail is better than less. Candidates for Journeyman/Master Beekeeper must compile the original PSC documentation in a **Personal Beekeeping Portfolio** (see [APPENDIX G Portfolio Documentation Guidelines](#)) and should submit documentation via electronic format to the Master Beekeeper Program Director/Committee PRIOR to taking the written examination. The personal portfolio is a basic compilation of the candidate's beekeeping service and achievements – **the hard copy should be printed and is to be turned in for final review at testing**. The use of a three-ring binder for your portfolio hard copy submission has been the preferred method in the past. The MBP Director/Committee Members reserve the right to accept or reject PSCs. Submitting them electronically 30 days in advance of testing will help the candidate determine if PSCs will be accepted prior to final submission of the portfolio. A Cover Sheet is provided in [APPENDIX J PROGRAM FORMS](#) for each level to assist you in compiling and organizing the required elements for each level.

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

- 1) Presenting bee-related lecture or workshop to non-beekeeping group (youth or adult)
- 2) Presenting bee-related lecture or workshop to a beekeeping class, club, conference
- 3) Serving a full year as an officer in a local, state, or national beekeeping association
- 4) Assisting members of youth organizations (4-H, Scouts, FFA) with project work
- 5) Mentoring a new beekeeper through at least one complete year of beekeeping
- 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 an observation hive for school or civic group
- 9) Assist local County Extension or other public agencies with bee-related programming including but not limited to...
 - Serving as a member of your county swarm removal list (must document number of calls/visits) and providing it to local officials (county extension, State Apiculture and Pollinator Specialist, local police/animal control)
 - Serving as a point of contact for identifying swarms, bee colonies, and other stinging insects (must document number of calls/visits)
 - Giving an educational presentation to Master Gardeners
 - Assisting the State Apiculture and Pollinator Specialist or local county agent with delivering a local program (ie: 4H camps, field trips, grower trainings)
 - Assisting the local farmers market or agricultural fair with educational booth/material
 - Serving as a sponsor/mentor of a participant in the 4H Honey Bee Project (may require a background check)
 - Writing an article for local extension agent news column

Presentation Guidelines:

- 1) Be punctual, trustworthy and reliable. Follow through on your commitments and responsibilities. Call if you will be delayed or cannot attend the event. Make a reasonable effort to find a replacement speaker if you are going to miss a commitment.
- 2) Maintain a friendly, warm, and courteous attitude toward the public.
- 3) Communicate effectively with clients, staff and fellow Master Beekeeper Program Students.
- 4) Dress appropriately for the volunteer activity in which you are involved.
- 5) Follow affirmative action policies which forbid discrimination against anyone because of their race, color, gender, nation of origin, religion, age or disability.

APPENDIX C Major Core Credit Requirements

Candidates MUST be able to document activities to support completion of Master Level Major and Minor Core Credits. As with Public Service Credits, documentation is key to your efforts being accepted for credit. See [APPENDIX B Public Service Credit Requirements](#) for more information regarding documentation. You may also contact the MBP Director/Committee if you would like to submit an activity for consideration that is not a pre-approved Major/Minor Core Credit. Three credits within your major are required at the Master Level. Five additional credits must be earned at the Master Craftsman Level for a total of 8 Major Core Credits. You may find a Major/Minor Core Credit Documentation Form in [APPENDIX J PROGRAM FORMS](#) to assist you with documentation of credits. Please contact MBP Director/Committee if you have questions about any of the requirements. All credits are to be submitted a minimum of 30 days PRIOR to testing.

Choose from the following MAJORS:

1) Diagnosis and Treatment of Honey Bee Pests, Parasites, and Pathogens

- a) Pass (with 80% or higher) an exam*** on diseases and pests of the honey bee.
- b) Pass (with 80% or higher) a tutorial* on either pests/parasites of the honey bee, or diseases of the honey bee.
- c) Present lecture on bee pests/diseases at state beekeepers meeting or higher OR at three local associations.
- d) Switch to and document use of IPM (integrated pest management) in personal beekeeping operation. Documentation should reflect at least one season and include assessment, planning, implementation, and evaluation.
- e) Assist other beekeepers with diagnosis of pests/parasites/pathogens in their colonies. Must document contact with beekeepers and provide presentation to local beekeeping association.
- f) Acquire a pesticide applicator license and provide a presentation at a local club on safe pesticide use and how to protect bees from pesticide exposure in various situations (with PowerPoint).
- g) Create reference collection (sterile) of bee pests and diseases.
- h) Research and review 1 pest, parasite, or disease of honey bees. The review may be published on the SCBA website. The written review must be accompanied by a PowerPoint presentation.
- i) Attend 3 training workshops on bee pests/diseases (must be able to document).
- j) Provide presentations to two local beekeeping associations on history, biology, and management of either varroa or small hive beetle with outline and PowerPoint.

2) Pollination Ecology and Bee Botany

- a) Provide pollination services for gardener (not self) or commercial fruit/nut/vegetable grower (must be able to provide documentation from grower) for a period of one season. Supporting documentation such as crop type, pictures, and a log of season should be provided.
- b) Plant bee-friendly garden in public area (such as library, town square, etc.) Local authority verification, pictures, and other supporting evidence required.
- c) Present lecture on pollination ecology or bee botany at state beekeepers meeting or higher. Must provide documentation, notes, outline, PowerPoints if used, etc.
- d) Produce handout/flyers of local honey plants and when they bloom for local (county or region) clients and distribute via county or state fairs or other public events.
- e) Pass (80% or higher) written examination*** on bee plants.
- f) Research and review 1 plant that is a major honey production plant in South Carolina. The review may be published on the SCBA website. The written review must be accompanied by a PowerPoint presentation.
- g) Become a certified South Carolina Master Gardener.
- h) Be trained in identifying pollen present in honey samples.
- i) Document a season of work performing pollinator education to the general public.
- j) Create museum-quality plant collection of regional honey plants.
- k) Create a native bee colony habitat for a local public garden or at another approved site.

3) Honey Judging

- a) Judge state level or higher honey show competition (State Fair, State/Regional/International Bee Association).
- b) Become a Certified Honey Judge.
- c) Win 1st or 2nd place in any category of state or higher level honey show (State Fair, State/Regional/International Bee Association).
- d) Document ability to produce mead. Must provide a tutorial type of manual or PowerPoint.
- e) Pass (80% or higher) a written exam*** on honey judging.
- f) Research and review 1 type of honey important to the South Carolina beekeeping industry. The review may be published on the SCBA website. The written review must be accompanied by a PowerPoint presentation.
- g) Educate public about hive products and their uses at a fair booth or other such event via a poster or display entry.
- h) Show evidence that you maintain a South Carolina licensed honey house.

- i) Be trained in identifying pollen present in honey samples.
- j) Document knowledge (either through written examination***, creating of publications, video production, etc.) of honey production/processing/regulations and other products of the hive.
- k) Provide a presentation with PowerPoint and a guidebook on honey processing at state beekeepers meeting or higher.

4) Beekeeping for Rural Development

- a) Document knowledge by creating a peer reviewed publication, tutorial, learners guide, etc. of various methods of queen rearing.
- b) Pass (80% or higher) a practical** (hands on) examination of bee pests, parasites, and diseases, to include knowledge of non-chemical control of these disorders.
- c) Document knowledge (either through written examination*** or creating a peer reviewed publication, a video production, etc.) of honey production/processing and other products of the hive, including value adding theory.
- d) Document proficiency in hive equipment assembly by documenting teaching of a hands-on equipment module at a local association beekeeping class.
- e) Be proficient in a foreign language.
- f) Volunteer 30 hours for Winrock, Partners of America, or other similar organizations.
- g) Become a Certified South Carolina Master Gardener.
- h) Develop tutorial* on beekeeping for rural development to include learner's guide, written test, notes, and suggested practical learning exercises.
- i) Document knowledge (either through written examination***, creation of SC Extension bulletins, etc.) of pollination ecology, general honey bee biology, and colony management for honey production.
- j) Work with Clemson to develop and/or implement a program to benefit extension education in pollination in South Carolina.

5) Queen Production

- a) Document that you are rearing queens according to best management practices through submission of a journal, log, or record over time of your queen rearing practices.
- b) Attend an instrumental insemination course.
- c) Pass (80% or higher) examination*** of mating biology and bee genetics.
- d) Research and review alternative queen rearing methods industry. The review may be published on the SCBA website. The written review must be accompanied by a PowerPoint presentation.
- e) Volunteer with a professional queen breeder (40 hours needed). Must submit a log of hours signed by the breeder.
- f) Research and review one (1) race of honey bee. The review may be published on the SCBA website. The written review must be accompanied by a PowerPoint presentation.
- g) Serve as "local expert" and assist other beekeepers with queen production. Must be able to document (40 hours needed).
- h) Create a tutorial* on queen rearing to include a written guidebook, exam, and PowerPoint.
- i) Provide documentation that you have mentored and trained others in the dynamics of queen rearing by offering a queen rearing course or similar training.
- j) Provide documentation that you are selecting for resistance traits in your own queen rearing operation by documenting via a written handbook on your system and methods.

6) Africanized Honey Bees

- a) Document proficiency in USDA bee identification methods by developing a handbook, presentation at SCBA conference, or PowerPoint Presentation at two local associations.
- b) Generate Africanized honey bee information (written and presentations, etc.) for a specific target audience (Master Gardeners, etc.).
- c) Pass (with 80% or higher) a tutorial* on Africanized honey bees.
- d) Pass (80% or higher) examination*** of mating biology and bee genetics.
- e) Acquire a pesticide applicator license and provide a presentation at a local club on safe methods to euthanize nuisance honey bees.
- f) Document trip to another area having Africanized honey bees. Candidate must be able to thoroughly document working with Africanized honey bees while in the area.

g) Serve as "local expert" and assist other beekeepers with Africanized honey bee related issues. Proper documentation required to reflect the extent of assistance given.

h) Present lecture on Africanized honey bees at state beekeepers meeting or three local associations.

7) Advanced Bee Husbandry

a) Switch to and document use of IPM (integrated pest management) in personal beekeeping operation for one season.

b) Pass (80% or higher) a practical** (hands on) examination of bee pests, parasites, and diseases.

c) Provide pollination services for gardener (not self) or commercial fruit/nut/vegetable grower (must be able to document) for one season.

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

e) Become a certified South Carolina Master Gardener.

f) Document knowledge (either through written examination*** or creating a peer reviewed publication, a video production, etc.) of honey production/processing and other products of the hive, including value adding theory.

g) Document via workbook, logs, etc. that you are successfully rearing queens according to best management practices.

h) Attend instrumental insemination course.

i) Demonstrate knowledge of proficiency in USDA guidelines by documenting best practices within your own beekeeping system and methods.

j) Pass (80% or higher) examination*** of mating biology and bee genetics.

k) Present lecture on honey bee state/federal transportation laws at state or local association meetings.

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 (80% or higher) an examination*** on bee and wasp identification.

- f) Research and produce a review of one species of native South Carolina bee. The review may be published on the SCBA 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) Provide native bee education to the general public via handout or flyer distributed at State or local fair or other public events.
- 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. SCBA document).

9) Apiculture Education

- a) Develop an original bee related educational PowerPoint presentation (check with MBP Director/Committee for approval of your 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 another approved topic for a popular journal, magazine, or newsletter.
- e) Pass (80% or higher) a tutorial* or exam*** on apiculture education basics.
- f) Attend 5 state or higher-level beekeeping seminars (such as the South Carolina State Beekeepers Association spring or summer annual meetings, 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 (i.e., the individual you are mentoring is showing clear progress due to your instruction) via self-created pre/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) Participate in peer review of presentations by other beekeepers, accompanied by a feedback evaluation form signed by the reviewer, presenter and outreach contact.
- k) Teach a recognized curriculum module on beekeeping at an approved SCBA beekeeping course at the level immediately below your current level. Must document the module taught and provide outline, PowerPoint, and student evaluations of your teaching.
- l) Supervise or mentor beekeeping educators at one level below your current level at a SCBA MBP recognized course. Must document supervisory work performed and present issues, findings, and evaluations for improvement.

* **Tutorial** refers to presenting a short (15 minutes or less) presentation to one to three MBP appointed examiner(s) demonstrating your understanding of the subject matter and your ability to present the material to another or a group. The opportunity to present a tutorial requires the candidate to schedule their presentation with the SCBA MBP by June 1st and is only offered at SCBA summer conferences. Tutorials should include written material, a post test, and a PowerPoint.

** **Practical** examination refers to a hands-on demonstration presented to one to three MBP appointed examiners(s) demonstrating your ability to perform a specific task. The MBP may ask the candidate to demonstrate a related specific task during the candidate's practical testing. Ex. During a colony inspection for assessment of diseases/parasites/pests the candidate may be asked to perform an alcohol wash. Practical exams may satisfy no more than two credits at any MBP level. Requests for Practical exams to complete major/minor credits must be made by June 1st and will only be offered at SCBA summer conferences.

*** **Exam** with regard to major or core credits refers to a testing of knowledge. It may be in the form of a written test or an assigned term paper or other assignment demonstrating the individual's thorough understanding of the subject matter. Exam credits may satisfy no more than two credits at any MBP level. Exams must be requested by June 1st in advance of written and oral testing at SCBA summer conferences.

APPENDIX D Minor Core Credits

Minor Core Credit Requirements— A Certified Level Beekeeper must complete 3 minor credits in order to progress to the Journeyman Level. To achieve the Master Beekeeper certification, a Journeyman Beekeeper must document completion of 5 additional minor credits *outside* their major before they can be considered for advancement to the Master Beekeeper Level. Master Beekeepers must complete an *additional* 8 minor core credits for a grand total of 16 minor core credits to qualify for the Master Craftsman Level. You may choose any of the following credits below *not in your declared major* to fulfill this requirement. In addition to this, you may choose credits from other majors (other than those that may also be listed in your declared major) [APPENDIX C Major Core Credit Requirements](#) to fulfill your minor core credits. (i.e.: some activities may be listed in multiple majors. If an activity is listed in your declared major, you may not use that activity to satisfy a core credit even though it may be listed under another major). Also, you may not use activities used previously for PSCs for Major/Minor Core Credits. Please contact the MBP Committee if clarification is needed. You may use the Major/Core Credit Form to assist in your documentation – see [APPENDIX J PROGRAM FORMS](#). All credits are to be submitted a minimum of 30 days PRIOR to testing.

- 1) Winning 1st or 2nd place in an authorized competition (State Fair, State/Regional/International Bee Association) in one of the following categories:
 - Comb or cut-comb honey/ extracted honey
 - Crystallized (spun or creamed) honey, or
 - Beeswax
- 2) Publishing article in a beekeeping publication (excluding newsletters).
- 3) Publishing article in a non-beekeeping publication (with at least state-wide distribution).
- 4) Being recognized as a beekeeping authority in your local area by appearing on radio or TV.
- 5) Become trained in life-saving treatment of persons suffering from allergic reactions to insect stings and present learned information to local association or via presentation at SCBA conference or newsletter article.
- 6) Attending at least three regional multi-state, national, or international beekeeping meetings.
- 7) Conduct a program or workshop at a state, regional, national or international meeting or convention.
- 8) Demonstrating competence in small-scale queen rearing.
- 9) Completing a course on artificial queen insemination.
- 10) Documenting a legally-licensed honey processing facility.
- 11) Participating/volunteering in a beekeeping research or extension project at an approved institution.
- 12) Acquiring other certified bee-related training as approved by MBP Committee.
- 14) Serving two or more years as officer of a bee organization at the state level or higher (need not be consecutive nor in the same organization).
- 15) Documenting culture/maintenance of other bee species (*Bombus* spp., *Megachilidae*, etc.)
- 16) Mentoring a beekeeping group in a rural/underprivileged/international community.

- 17) International beekeeping experience whereby clear benefits to the group and to SCBA are documented.
- 18) Maintaining a public Blog, public journal, or public forum on honey bees. Must be informational, resource based in nature, easily accessible, and advertised and must be able to show the number of site visits during the year.
- 19) Volunteer with a commercial beekeeper or organized university apiary (40 hours needed). Log must be submitted and signed by a sponsoring organization.
- 20) Serving two or more years as President of an SCBA affiliated local association.

Note: Other documentation may be considered but we recommend that you consult the MBP Director prior to undertaking an event not on the above list.

APPENDIX E **Communication Skills Applicable** *for Master Craftsman Level*

1. Nominee must present a program at a State Beekeeper conference. Program may be in the form of a general presentation, workshop, or similar activity. Candidate must present the Program topic to the MBP Committee for review and scheduling by March 1st prior to the SCBA Summer Conference.
2. Nominee must complete two of the following activities with documentation of publication:
 - A. Prepare and publish an article in a beekeeping journal.
 - B. Prepare and publish an article on bees or beekeeping in non-beekeeping publication.
 - C. Be interviewed on radio or TV program regarding honey bees and/or beekeeping.
 - D. Be featured in a newspaper article regarding honey bees and/or beekeeping.

APPENDIX F Examinations and Fees

Written Testing is required at the Certified, Journeyman, and Master Levels. Content of tests may include but is not limited to material covered in the specific level course guide, presentations, or reading lists in addition to all material from the previous levels. Written tests may consist of multiple choice, true/false, short answer, matching, diagrams, and short essay questions. All required level credits must be completed and submitted electronically 30 days prior to written testing. All written testing will be administered by the SCBA Master Beekeeping Program Committee (MBPC).

Practical Testing is required at the Certified, Journeyman, and Master Levels as described below:

The **Certified Practical** is a field hive assessment that may include but is not limited to being able to describe the physical parts of a beehive (common terms); 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. A score of 80% is required to pass. The Certified Practical may be administered by a certified Journeyman, Master, or Master Craftsman that maintains current SCBA membership in good standing. A Practical test proctored without the stated requirements will be deemed invalid.

At the **Journeyman Level**, the Practical is divided into 2 parts: a field practical and a lab practical. The lab portion may consist of but is not limited to: identifying pests, parasites, and pathogens; reading pesticide labels and determining which is the safest to use around bees; identifying beekeeping items; examining honey labels for errors; distinguishing between bees, wasps, hornets, etc.; identifying anatomical structures of a bee, flower, etc.; honey removal/extraction; judging honey for competition; and/or demonstrating basic intermediate beekeeping skills. To complete the field practical, the Journeyman candidate must submit a video demonstrating one of the following beekeeping skills: their ability to monitor and treat a honey bee colony for varroa OR their ability to remove and harvest honey from a honey bee colony. A rubric with required elements is available from the MBP Committee upon request. Quality of photography is not essential if the required elements are clearly demonstrated. A score of 80% or above is required to pass. The lab portion of the practical will be administered by the MBPC at the Spring and Summer Conferences. The field portion may be completed by the member and submitted any time during the year to be scored by the MBPC.

The **Master Level Practical** is in the form of a Field Hive Assessment offered exclusively at the SCBA Summer Conferences. The MBPC will provide an outline of the field hive assessment testing to the candidate in advance of testing. A score of 80% or above is required to pass. The practical will be administered by a Master Review Board designated by the SCBA MBPC. Registration for testing must be made by June 1st to insure the availability of an expert review board.

Oral exams are required at the Master and Master Craftsman Levels and will only be conducted at SCBA Summer Conferences. The candidate is required to give written notice to the SCBA MBP Director of his/her desire to test no later than June 1st to ensure the availability of an expert review board. The MBP Committee will provide an outline of the oral testing to the candidate in advance.

All testing materials are property of the SCBA MBP and are to be administered solely by the SCBA MBPC. Any unauthorized use may result in a forfeiture of MBP credentials and the ability to participate in the MBP. All materials are vetted through committee and held to the highest standard of beekeeping practice.

All Certified Level certificates will be presented at the candidate's local club by the leadership at their club meetings. All Journeyman, Master, and Master Craftsman will be awarded their certificates at the conclusion of the conference where level requirements were completed or at the next occurring State Spring or Summer Conference.

Current Testing Fees:

| | |
|------------------------|----------|
| Certified Level | \$ 10.00 |
| Journeyman Level | \$ 35.00 |
| Master Level | \$ 75.00 |
| Master Craftsman Level | \$100.00 |

Re-testing Protocol:

Participants may re-take any test that they failed at the next state conference meeting where that specific testing session is offered at no charge.

A participant failing the exact same testing section twice in one year must wait an entire calendar year before attempting the section again. Testing fees will apply for the third attempt. In the case of Master or Master Craftsman testing failure, re-testing may occur the following year at no charge. Any subsequent re-testing will be subject to testing fees.

APPENDIX G Portfolio Documentation Guidelines

Beekeeping Portfolio and Documentation Guidelines:

- 1) Candidates for Journeyman Level and above should complete Public Service Credits throughout the year and compile documentation in a **Personal Beekeeping Portfolio**. The Candidates for Journeyman, Master, and Master Craftsman Level should also include the documentation of Major/Minor Core Credits. An electronic form of the portfolio should be submitted by email for review by the MBP Committee **PRIOR** to taking the candidate level exam. Periodic electronic submission of credits to the MBP Committee via email is highly recommended in order to ensure adequate documentation and fulfillment of requirements. The original hard-copy portfolio is to be submitted for final review with a completed level cover sheet at testing.
- 2) Each level is required to use the appropriate "Cover Sheet" to organize and summarize their credits (see [APPENDIX J PROGRAM FORMS](#)). This Cover Sheet serves as a table of contents for your documentation of achievement in your Beekeeping Portfolio.
- 3) The key to presenting all credits - public, major/minor core - is **adequate documentation** of the event/activity.

***Note:** All materials should be presented in a neat, professional, and well-organized Personal Beekeeping Portfolio with all original forms and documentation. Upon completion of review, the MBP Committee will return your Portfolio. The Master Beekeeping Program Director/Committee reserves the right to accept or reject documentation during program audits of the SCBA Master Beekeeper Program.*

- 4) Two items of supporting documentation are required for EACH Public Service Credit. Primary documentation is represented by original media: conference programs, testimonial letters from third parties, newspaper clippings, photographs, or video recordings. Secondary documentation is represented by the Public Service Credit Form which should include contact information for the activity coordinator and his/her signature. Incomplete forms may not be accepted.
- 5) In order to provide adequate time for review of **Personal Beekeeping Portfolios**, the MBP Committee may set a deadline for Portfolio submissions (June 1st) PRIOR to the testing of any level. If a candidate is not able to meet the deadline, the awarding of any earned achievement may be delayed until the next State Conference.

APPENDIX H Reciprocal Certification Recognition Policy

The SCBA will not issue certification to duplicate an equivalent certification achieved by another certifying agency, however, the outside certification may be considered as foundation for the next equivalent level in the SCBA MBP and evaluated on a case-by-case basis by the MBP Committee based on the following criteria:

- 1) Submission and verification of level certification including documentation and contact information for certifying agency.
- 2) Submission of supporting documentation of beekeeping public service and any beekeeping projects that may qualify for credit as a major/core credit.

CERTIFIED LEVEL: Most Certified Level certifications may be accepted as sufficient for a new SCBA member to begin working toward their Journeyman Level Certification.

JOURNEYMAN, MASTER, MASTER CRAFTSMAN: Due to the vast differences in the various beekeeping programs, testing most likely will be required for the Journeyman, Master, and Master Craftsman Levels. To maintain the integrity of the SCBA MBP, we must insist that the level of mastery is achieved before awarding the level certification.

Public Service Credits are a valuable component to the success of the SCBA MBP and the development of its participants. The huge volume of volunteer hours required to fully educate our membership and provide solid beekeeping instruction to the community mandates that we require these credits for new members who may have already achieved the Journeyman, Master, or Master Craftsman Levels from another agency. This also gives us an opportunity to observe and verify that the candidate's beekeeping practice is in line with our stated best beekeeping principles.

A member who moves into South Carolina with a Master or Master Craftsman Level certification will be recognized as such but will not be given an automatic SCBA certification. If a member desires to earn this certification from SCBA MBP, then the member must complete all the requirements of that level in SCBA MBP. No automatic reciprocal certifications will be issued based on another agency's certification.

Any questions or concerns regarding certification reciprocity should be submitted to the SCBA MBP for consideration.

This policy was adopted by unanimous vote of the SCBA Executive Committee, May 18, 2018

APPENDIX I RESEARCH PROJECT – *Master Craftsman Level Only*

The Master Craftsman Research Project is individually selected and pursued with mentoring from an expert in the research field chosen. We suggest the following timeframe to ensure your project proceeds in a timely manner.

RESEARCH PROJECT Year 1

1. Choose project focus area and subject, then submit to MBP Committee for approval.

For example: Focus Area: Pest/Pathogen Control
Subject: Small Hive Beetles

Suggested Focus Areas:

Pest/Pathogen Control

Biology—pollination, behavioral biology, genetics, ecology

Chemistry—the chemistry of urban honey (pollutants, etc.), propolis/wax chemistry

Earth and Atmospheric Sciences—effect of climate on bee populations, foraging behavior, and honey production

Mathematics—modeling bee behavior or disease dynamics (honey bee pathogens)

Physics—the physics of flight, honey bee optics, foraging models

Psychology—organizational psychology

Computing—analysis of bee motion, robotics

Interactive computing—real-time hive monitoring

Aerospace Engineering—bee flight

Biomedical and Materials Engineering— antimicrobial and structural characteristics of propolis

Chemical Engineering—honey extraction, processing, analysis

Electrical Engineering—IR web cams

Industrial Engineering—industrial honey production

Mechanical Engineering—stand/hive construction, scale-up for developing countries

Economics—economics of pollination

Literature and History—communication about the project, cultural history of honey production

Public Policy—zoning urban beekeeping, bees and sustainability

Business—marketing and financing urban honey production

Architecture—hive design and construction

City planning—GIS of urban areas (forested, bare, weedy, concrete habitats)

2. Literature Review—journals, books, interviews, popular articles
 - a. What is known about your proposed topic?
 - b. How have others executed similar projects?
3. Seek and affirm project affiliate (i.e. what institution and individual [expert advisor] will provide project oversight?) with the concurrence of the SCBA MBP Committee.
4. Write a project proposal (3–5 pages maximum)
 - a. Title

- b. Objective
- c. Background
- d. Materials and methods
- e. Expected outcome
- f. Potential impact
- g. References

5. Allow advisor to review proposal

6. Submit proposal to MBP Committee—the proposal must be approved by the committee prior to project initiation

7. Collect preliminary data

- a. Acquire/construct necessary materials required for project
- b. Use proper data collection methods (lab notebook, spreadsheets, etc.)
- c. Modify research project based upon preliminary data

8. Review first year's progress with advisor

Research Project Year 2

1. Review project progress with advisor

2. Project execution

- a. Data collection
- b. Continued literature review: any recently published studies on the topic?

3. Preliminary data analysis—must be approved by MBP Board to proceed

4. Analyze and synthesize the results

- a. Photographs
- b. Data tables, graphs, and figures
- c. Statistical analysis

5. Review project with advisor

6. Prepare final paper, submit to advisor for review

- a. Title
- b. Abstract
- c. Introduction
- d. Materials and methods
- e. Results
- f. Discussion
- g. Conclusion
- h. Acknowledgments
- i. References

Note: This project should reflect a University Level Master's Degree Research Project

7. Project timeline

- a. First draft of final paper to be submitted to the MBP Committee minimum of three months before anticipated advancement date (MBP exam day). Multiple drafts or edits may be necessary.
- b. Oral exam may be scheduled (on exam day – summer conference) once the first draft of project report is submitted.
- c. Submit final, approved, and edited manuscript to MBP Committee on exam day.
- d. Thirty-minute oral presentation of research project to be presented at the SCBA Summer Conference with an accompanying slide show.

APPENDIX J PROGRAM FORMS

Public Service Credit Form

MAJOR / MINOR Core Credit Form

CERTIFIED Level Cover Sheet

JOURNEYMAN Level Cover Sheet

MASTER Level Cover Sheet

MASTER CRAFTSMAN Cover Sheet



Public Service Credit Form

- 1-Master Beekeeper candidate is to complete form below.
- 2-Representative sponsoring/hosting event must sign form.
- 3-Candidate will present completed form and any accompanying documentation as a part of a “Beekeeping Portfolio” to be turned in on day of exam. Please make a copy for your records.
- 4-Questions regarding Public Service Credits should be directed to **SCMasterbeekeeper@gmail.com**

On this date: _____, (name) _____, a candidate for the South Carolina’s (SCBA) 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 a group
- 2. Serving as an Officer in a local, state, or national beekeeping association for one year.
- 3. Assisting members of youth organizations (4-H, Scouts, FFA) with project work
- 4. Mentoring a new beekeeper through at least one complete YEAR
- 5. Public demonstration of beekeeping topic at fair, festival, or similar public event
- 6. Providing a hive of bees to pollinate a public garden
- 7. Establishing and maintaining an observation hive for school or civic group
- 8. Assist local County Extension or other public agencies with bee-related programming (see Manual Appendix B for documentation requirements).
- 9. Publication of beekeeping and related topic articles in journals, newsletters, etc.

10. Other: _____

Organization name: _____

Name of Event: _____

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: _____



MAJOR / MINOR Core Credit Form

- 1-Master Beekeeper candidate is to complete form below.
- 2-Candidate will present completed form and any accompanying documentation as a part of a "Beekeeping Portfolio" to be turned in on day of exam. Please make a copy for your records.
- 3-Questions regarding Major/Core Credits should be directed to SCMasterbeekeeper@gmail.com

Date: _____

SCBA Member Name: _____

Declared Major: _____

Submitted Credit: MAJOR MINOR (Circle One)

Apply Credit towards: JOURNEYMAN MASTER MASTER CRAFTSMAN (Circle One)

Description of Credit Completed as listed in the MBP Manual:

Description of Specific Action Taken to Earn Credit:

Please list any attached documentation:

Printed Name/Title of Representative or Witness:

Signature of Witness: _____

Contact Information for Signee
(email/phone): _____



WRITTEN EXAM SCORE: _____ PASS / FAIL

PRACTICAL EXAM: PASS / FAIL

Local Association: _____

Candidate Name: _____

Is Candidate a Current Member of the SC Beekeepers Association? YES NO (circle one)

Note: Candidate MUST be a current year member of SCBA in order for any achievement to be recorded.

Address: _____

Email: _____

Phone: _____

CERTIFIED WRITTEN EXAM

Written Exam Date: _____ Score: _____

MBPC Proctor Name: _____

Proctor's SIGNATURE: _____

Re-Take Exam Date: _____ Score: _____

Written Exam Proctor Name: _____

Proctor's SCBA Certification Level: _____

Note: Certification as SCBA Journeyman or above is required to Proctor at this level.

Proctor's SIGNATURE: _____

CERTIFIED PRACTICAL EXAM

Candidate Name: _____

Practical Exam Date: _____ Score: _____

Practical Exam Proctor Name: _____

Proctor's SCBA Certification Level: _____

Note: Current SCBA membership and Certification as SCBA Journeyman or above is required to Proctor this exam

Proctor's SIGNATURE: _____

Re-Take Exam Date: _____ Score: _____

Practical Exam Proctor Name: _____

Proctor's SCBA Certification Level: _____

Note: Current SCBA membership and Certification as SCBA Journeyman or above is required to Proctor this exam

Proctor's SIGNATURE: _____

I, _____, certify that I have owned/cared for honey bees
(Print Candidate Name)

for a minimum of 1 calendar year.

CANDIDATE SIGNATURE: _____

Date: _____



PUBLIC SERVICE CREDITS: _____ (5)

MINOR CORE CREDITS: _____ (3)

WRITTEN EXAM SCORE: _____ PASS / FAIL

PRACTICAL EXAM SCORE: _____ PASS / FAIL

Local Association: _____

Candidate Name: _____

Is Candidate a Current Member of the SC Beekeepers Association? YES NO (circle one)

Note: Candidate MUST be a current year member of SCBA in order for any achievement to be recorded.

Address: _____

Email: _____

Phone: _____

PUBLIC SERVICE CREDITS

Briefly summarize the PSC Credits earned: *(5 Credits are required)*

1. _____
2. _____
3. _____
4. _____
5. _____

MINOR CORE CREDITS

List Minor Core Credits documented:

(3 credits are required from outside your declared major for Master Level)

1. _____
2. _____
3. _____

Date Portfolio Submitted: _____ Complete: _____

Location: _____

SCMBP Committee Member(s) Reviewing: _____

SIGNATURES: _____ Date _____

_____ Date _____

JOURNEYMAN WRITTEN EXAM

Written Exam Date: _____ Score: _____

Location: _____

MBPC Proctor Name: _____

Proctor's SIGNATURE: _____

Re-Take Exam Date: _____ Score: _____

Location: _____

MBPC Proctor Name: _____

Proctor's SIGNATURE: _____

(LAST NAME)

PRACTICAL EXAM

Practical Exam Date: _____ Score: _____

Location: _____

MBPC Practical Exam Proctor Name: _____

Proctor's SIGNATURE: _____

Re-Take Exam Date: _____ Score: _____

Location: _____

MBPC Practical Exam Proctor Name: _____

Proctor's SIGNATURE: _____

I, _____, certify that I have owned/cared for honey bees
(Print Candidate Name)
for at least 1 year following the completion of the Certified Level for a minimum of 2 years of beekeeping experience.

CANDIDATE SIGNATURE: _____

Date: _____



PUBLIC SERVICE CREDITS: _____ (10)

MAJOR CREDITS: _____ (3)

MINOR CREDITS: _____ (5)

WRITTEN EXAM SCORE: _____ PASS / FAIL

PRACTICAL EXAM SCORE: _____ PASS / FAIL

ORAL EXAM SCORE: _____ PASS / FAIL

Local Association: _____

Candidate Name: _____

Is Candidate a Current Member of the SC Beekeepers Association? YES NO (circle one)

Note: Candidate MUST be a current year member of SCBA in order for any achievement to be recorded.

Address: _____

Email: _____

Phone: _____

PUBLIC SERVICE CREDITS

Briefly summarize the PSC Credits earned: (10 Credits are required following the completion of Journeyman)

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

DECLARED MAJOR: _____

List Major Core Credits documented: *(3 of 10 credits are required within your declared major)*

- 1. _____
- 2. _____
- 3. _____

List Minor Core Credits documented: *(5 credits are required from outside your declared major)*

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

Date Portfolio Submitted: _____ Complete PSC: _____

MAJOR/MINOR Core: _____

Location: _____

SCMBP Committee Member(s) Reviewing: _____

SIGNATURES: _____ Date _____

_____ Date _____

MASTER WRITTEN EXAM

Written Exam Date: _____ Score: _____

Location: _____

MBPC Written Exam Proctor Name: _____

Proctor's SIGNATURE: _____

Re-Take Exam Date: _____ Score: _____

Location: _____

MBPC Written Exam Proctor Name: _____

Proctor's SIGNATURE: _____

ORAL EXAM

Oral Exam Date: _____ Score: PASS / FAIL

Location: _____

Oral Exam Review Board: *(minimum of 3 expert individuals required)*

Name: _____

Qualifications: _____

SIGNATURE: _____

Name: _____

Qualifications: _____

SIGNATURE: _____

Name: _____

Qualifications: _____

SIGNATURE: _____

FIELD PRACTICAL EXAM

Field Exam Date: _____ Scores: _____

Location: _____

1st Field Exam Proctor Name and certification level: _____

2nd Field Exam Proctor Name and certification level: _____

Note: Certification as Master or above is required to Proctor at this level.

Proctor's SIGNATURE: _____

Proctor's SIGNATURE: _____

Re-Take Field Exam Date: _____ Scores: _____

Location: _____

1st Field Exam Proctor Name and certification level: _____

2nd Field Exam Proctor Name and certification level: _____

Note: Certification as Master or above is required to Proctor at this level.

Proctor's SIGNATURE: _____

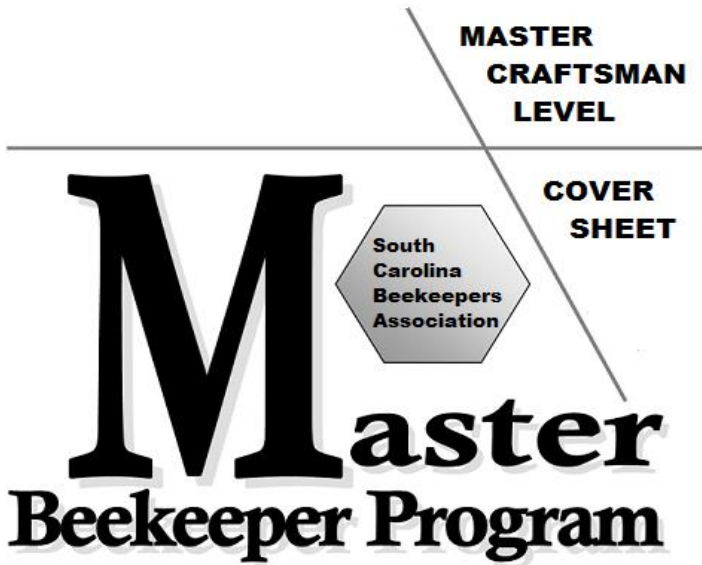
Proctor's SIGNATURE: _____

I, _____, certify that I have owned/cared for honey bees
(Print Candidate Name)

for at least 2 years following the completion of the Journeyman Level for a minimum of 4 years of beekeeping experience.

CANDIDATE SIGNATURE: _____

Date: _____



MAJOR CREDITS: _____ (5)
 MINOR CREDITS: _____ (8)
 PUBLIC SERVICE CREDITS: _____ (15)
 COMMUNICATION SKILLS: PASS / FAIL
 RESEARCH PRESENTATION: PASS / FAIL
 ORAL EXAM SCORE: PASS / FAIL

Local Association: _____

Candidate Name: _____

Is Candidate a Current Member of the SC Beekeepers Association? YES NO (circle one)

Note: Candidate MUST be a current year member of SCBA in order for any achievement to be recorded.

Address: _____

Email: _____

Phone: _____

DECLARED MAJOR: _____

List Major Credits documented:

(5 additional of 10 credits are required within your declared major for a total of 8)

1. _____
2. _____
3. _____
4. _____
5. _____

List Minor Core Credits documented: *(8 additional credits are required from outside your declared major for a total of 16)*

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

PUBLIC SERVICE CREDITS

Briefly summarize the PSC Credits earned: *(15 Credits are required – accumulated AFTER achieving the Master Level)*

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____

COMMUNICATION SKILLS

Topic of Presentation: _____

Date Submitted to SCMBP for Review and Scheduling: _____

SCMBP Committee Member(s) Reviewing: _____

SIGNATURES: _____ Date _____

_____ Date _____

State Conference of Presentation: _____

Date of Presentation: _____

Additional Communication Skills Activities: (2 are required)

1. _____

2. _____

I, _____, certify that I have owned/cared for honey bees
(Print Candidate Name)
for at least 2 years following the completion of the Master Level for a minimum of 6 years of beekeeping experience.

CANDIDATE SIGNATURE: _____

Date: _____

Date Portfolio Submitted: _____ Complete PSC: _____

Major/Minor Core: _____ Com Skill: _____ Research: _____

Location: _____

SCMBP Committee Member(s) Reviewing: _____

SIGNATURES: _____ Date _____

_____ Date _____

RESEARCH PRESENTATION

Briefly Describe the Topic/Scope of your Research Project: _____

Date Submitted to SCMBP for Review of Topic: _____

Review of Final Project: _____

Research Project Review Board:

Name: _____
Qualifications: _____
SIGNATURE: _____

Name: _____
Qualifications: _____
SIGNATURE: _____

Name: _____
Qualifications: _____
SIGNATURE: _____

Name: _____
Qualifications: _____
SIGNATURE: _____

Name: _____
Qualifications: _____
SIGNATURE: _____

MASTER CRAFTSMAN ORAL EXAM

Oral Exam Date: _____ Score: PASS / FAIL

Location: _____

Oral Exam Review Board: *(minimum of 3 expert individuals required)*

Name: _____

Qualifications: _____

SIGNATURE: _____

Name: _____

Qualifications: _____

SIGNATURE: _____

Name: _____

Qualifications: _____

SIGNATURE: _____

Name: _____

Qualifications: _____

SIGNATURE: _____

Name: _____

Qualifications: _____

SIGNATURE: _____

Name: _____

Qualifications: _____

SIGNATURE: _____