

## 2017 SYLLABUS FOR SEMBA'S BEEKEEPING COURSE FOR BEGINNERS

### General Overview

This course is designed for beginners to learn about the biology of the honey bee, the honey bee hive, tools needed to work with honey bees, feeding honey bees, seasonal management, honey extraction, and honey bee disease identification. Students will be given several sessions of basic beginning beekeeping instruction including lecture and hands-on field experience with their own hives on site.

### Anticipated Instructors:

Bill Sirr [wsirr@aol.com](mailto:wsirr@aol.com) (248) 544-8619  
Clay E. Ottoni [ceottoni@gmail.com](mailto:ceottoni@gmail.com) (248) 454-9800  
Richard I. Mendel [brescue@att.net](mailto:brescue@att.net) (734) 660-8621  
Winn Harless [winnbees@gmail.com](mailto:winnbees@gmail.com) (734) 453-2914

**Classes held:** 1:00 p.m., Sundays, **except as noted**

### Location:

Tollgate Edu. Center, M.S.U.  
28115 Meadowbrook Road  
Novi, MI 48377-3128

### Tuition

**\$150** per student, payable in advance, if you provide your own new hive & new bees. Family members may share their hive [SEMBA plans on ordering 40 (1 for each student taking the class) three pound (3#) packages of bees with a queen in each for installation at Tollgate each student's estimate cost for same is about an additional \$110-\$120]. **OR**

**\$200** per student, payable in advance, if you don't provide your own new hive (or share one with a family member who is also a student in the class) and new bees. **SEMBA WILL NOT PROVIDE A NEW HIVE OR NEW BEES.** Instead, the student may observe, from a distance, hives of students who did provide a hive for their own use.

*[Non-student cost is \$20 per session; but only with (a) prior approval from the Instructors and (b) payment in advance.]*

Tuition includes a paperback copy of the text entitled "*Beekeeping 101 – Handbook and guide for beginning beekeepers*" by Dana T. Stahlman, and an electronic copy of *Starting and Keeping Bees in Michigan*. [Tuition does **NOT** include the following items required for the course: **hive wood ware, bees, protective clothing, hive tool, and smoker, nor does it cover SEMBA conference registration.**]

### Application Requirements

Complete and submit the Application for SEMBA's Beekeeping Course for Beginners and pay tuition. Registration will continue until course is filled. Please note the course size is limited and preference for admission is granted to SEMBA members.

Please attend all of the course sessions. Attendance at each session is important, since it is difficult to duplicate hive conditions for non-attendees and classes often build upon prior classes. Reading text is also a must.

Students will participate in hands-on training in an on-site apiary (bee yard). Because this is a shared yard, all equipment and protective clothing **MUST BE CLEAN AND UNCONTAMINATED**. Each student will need to purchase protective clothing, tools, bees, and a hive. Students **DO NOT** need to have any equipment prior to starting the course; instructors will help with equipment selection, purchase options, and assembly.

The instructors will provide basic standard recommendations for equipment, but other equipment may be used, provided that it is clean/new/uncontaminated.

#### Suggested Gear

- \_\_\_ Bee veil (generally attached to a suit or jacket or hood),
- \_\_\_ Bee suit or jacket,
- \_\_\_ Bee gloves,
- \_\_\_ Work boots or shoes with protective ankle wraps,
- \_\_\_ Hive tool (and, optionally, a bee brush), and
- \_\_\_ Smoker.

#### SUGGESTED Hive Components – All woodenware must be NEW and UNUSED

- \_\_\_ Telescoping outer cover (for 8 frame hive),
- \_\_\_ Inner cover (for 8 frame hive),
- \_\_\_ At least 6 (7 better) medium hive bodies/supers/boxes (for 8 frame hive),
- \_\_\_ At least 48 (56 better) frames for medium hive bodies/supers/boxes (8 frames/box),
- \_\_\_ Screen bottom board with inspection tray (for 8 frame hive),
- \_\_\_ Hive stand (non-wood better, such as 4 concrete blocks),
- \_\_\_ Wood top feeder with floats (for 8 frame hive), and
- \_\_\_ Entrance Reducer (NOT NEEDED IF 3/4 inch risers on your bottom board to 5/16 inch).

#### Bees

- \_\_\_ **New package of bees with a queen (to be purchased in class).**

All participants must properly maintain all items left at Tollgate and conduct themselves in a friendly and helpful manner, following all rules.

*Students must timely remove hives and all other equipment and belongings from Tollgate; anything left will be auctioned with the proceeds going towards costs, expenses, and M.S.U.*

## **INTRODUCTION TO BEEKEEPING SYLLABUS OVERVIEW**

SESSION 1, MARCH 5 (All sessions begin at 1:00 p.m., **except as noted**, in Activity Center, **except as noted**, at Tollgate Education Center, M.S.U., 28115 Meadowbrook Road, Novi, MI 48377-3128)

- Introduction to Tollgate and discuss rules. (M.S.U. Tollgate Farm Manager)
- Introduction of Instructors.
- Discuss safety issues and EpiPens.
- Introduction to SEMBA Beekeeping Course (include need to pay for packages of bees).
- Discuss suggested continued education (including below Conferences), subscription discount to American Bee Journal and Bee Culture, and additional text.
- Synopsis of Langstroth and alternatives such as top bar hives, Warre' hives and skeps.
- Discuss the marvelous honey bee and the bee hive -- a super organism.
- Discuss beekeeping and setting goals.
- Basic Woodware Suggestions for this Course (for both hives and nucs).
- Basic Non-woodware Beekeeping Equipment Suggestions for this Course.
- TO DO: Distribute written textbook for the course.
- TO DO: Observe over-wintered hives of Clay E. Ottoni at Tollgate.
- TO DO: If weather permits, feed over-wintered hives (granular sugar and/or pollen substitute).

#### **Suggested continued education:**

?**March 10 & 11, 2017:** MBA Annual Spring Conf., see <http://www.michiganbees.org/> for details.

?**March 18, 2017:** SEMBA's Annual Beekeepers' Conference, at the Western Campus of Wayne County Community College, 9555 Haggerty Road, Belleville, MI 48236; beginning at 7:30 a.m.

## "SPRING" MANAGEMENT

SESSION 2, MARCH 19 (Before the session, read text pages: 7-31 and 40-46)

- Discuss hive placement (while temporarily at Tollgate in four "V" shaped groups and later this year at your final location removed from Tollgate).
- Demonstration of construction of box and frames.
- Discuss key points to construction.
- Discuss placing name & phone number under outer-cover & name on hive tools & wearing apparel.
- Answer questions regarding Equipment.
- TO DO: **Bring hive woodware [i.e., outer cover, inner cover, boxes, frames, foundation, screened bottom board, entrance reducer and feeder (wood hive stand, optional)] to be constructed.**
- TO DO: **Bring hammer, waterproof exterior glue, correctly sized nails for frames and hive bodies, and staples (air compressor and air powered crown staple gun). (Optional: 1½" x ¼" crown staples and air powered crown staple gun or 2", #6 deck screws and power driver.)**
- TO DO: **BEGIN TO CONSTRUCT HIVE EQUIPMENT.**
- TO DO: Optional, at your location, prime or stain exterior surfaces of hive.
- TO DO: Optional, at your location, paint any primed exterior surfaces of hive.

SESSION 3, APRIL 2 (Before the session, read text pages: 47-51, 71-78 and 85-86)

- Discuss foundation options and installation.
- Discuss installation of bee packages.
- Discuss possibly medicating packages.
- Discuss feeding bees - why, what, when and how.
- TO DO: Inspect dead overwintered hive(s), if any.
- TO DO: Identify future hive placement and hive owner by number, for reference purposes.
- TO DO: Continue to construct hive equipment, **bring** items (e.g., air compressor, staple gun, & jigs, if you have any) and supplies (e.g., wood ware, glue, nails, and staples).
- TO DO: Optional, at your location, prime & paint, or stain, exterior surfaces of hive.

SESSION 4, APRIL 23 (Before the session, read text pages: 86-88)

- Answer questions regarding installation of packages.
- Answer questions regarding feeding, and possibly medicating, packages.
- Brief overview of likely bee pathogens and possible interventions (and some likely pests).
- Discuss inspecting overwintered hives and handling dead-outs.
- Discuss feeding and medicating overwintered hives.
- TO DO: Look at overwintered hives.
- TO DO: If weather permits, "de-winterize" overwintered hive(s), **bring** camera.
- TO DO: Complete construction of hive equipment, **bring** items and supplies.
- TO DO: Finish, at your location, prime & paint, or stain, exterior surfaces of hive.

SESSION 5, APRIL (**Evening** of a date to be determined based upon arrival of bee packages)

- TO DO: **Bring** protective clothing, hive tool, and smoker.
- TO DO: **Bring** outer cover, inner cover, feeder, spacer, at least two (2) brood boxes, at least one set (8 or 10) of frames with foundation, bottom board, entrance reducer & hive stand (such as blocks), as well as bricks or rock for top.
- TO DO: **Bring** sugar syrup (and, optionally, medication).
- TO DO: Optional, medicate packages.

- TO DO: Install packages.
- TO DO: Feed bees in the hive (**and continue to do so**).

SESSION 6, April 30 (Before the session, read text pages: 52-54, 59-64 and 91-92)

- Discuss swarming (e.g., why the super-organism swarms and what happens to the original colony and the swarming colony when there is a swarm).
- Discuss equalizing and splitting overwintered hives.
- Discuss fundamentals of working a hive [e.g., what to bring, where to stand, how to remove and replace equipment (covers, boxes and frames), etc.].
- Discuss what to look for when inspecting a new hive.
- Discuss maximizing brood area.
- Reminder: working in your "group" and placing name & phone number under outer-cover & name on hive tools & wearing apparel.
- TO DO: Confirm name & phone number under outer-cover & name on hive tools & wearing apparel.
- TO DO: If weather permits, inspect overwintered hives, consider feeding and medication.
- TO DO: Consider splitting overwintered hives.
- TO DO: Inspect new hives (first from outside of the hive and then from inside with no more than two hives opened at a time and with at least one smoker lit throughout the entire time).
- TO DO: Feed new hives and consider adding second brood chamber to new hives.

SESSION 7, MAY 7 (Before the session, read text pages: 61-63 & review pages 71-78)

- Discuss types of bee hive management strategies (e.g., Hands-off, Chemical free, Traditional/Commercial, G.A.A.M.P., I.P.M. and Best Practices).
- Discuss I.P.M. type of treatment -- brood interruption options.
- Discuss I.P.M. type of treatment -- drone comb.
- Discuss inspecting all hives for queens and brood, adding box and moving frames.
- Discuss lighting smokers and smoker fuel options.
- TO DO: Inspect hives for queen and brood.
- TO DO: Add second brood chamber to new hives, if not already done.
- TO DO: Feed if needed.

### **"SUMMER" MANAGEMENT**

SESSION 8, MAY 21 (Before the session, read text pages: 59-61)

- Discuss Michigan honey flows.
- Discuss honey supering (why, when, and how).
- Discuss hive management practices and procedures (e.g., only one hive opened in an area at a time).
- Discuss what to look for when inspecting hives.
- TO DO: Inspect and feed new hives.
- TO DO: Add second or third brood chamber to new hives.
- TO DO: Add honey supers to overwintered hives.

SESSION 9, JUNE 11 **AT CONFERENCE CENTER** (Before the session, read text pages: 90-92)

- Discuss importance of nucs in the bee yard and swarm cells.
- Discuss summer increases (making nucs and addressing queens in nucs).
- Discuss what to look for when inspecting hives.
- Discuss and demo sugar roll.
- TO DO: Inspect hives and continue I.P.M.
- TO DO: Super where needed.
- OPTIONAL TO DO: (Optionally, install nuc).

SESSION 10, JULY 9 **AT CONFERENCE CENTER** (Before the session, read text pages: 93-101)

- Discuss thinking ahead -- issues and opportunities.
- Discuss fall requeening (using nucs or not).
- Discuss extracting surplus honey, if any.
- Answer questions regarding I.P.M., checking for pests (e.g., mites).
- Discuss (and demonstrate) how to move hives.
- Questions and answers (If students don't ask, instructors will.)
- TO DO: Check supers.
- TO DO: I.P.M. check for pests (e.g., mites and hive beetles), treat if necessary and honey will not be extracted.
- TO DO: (Optional date -- Remove hive)

SESSION 11, JULY 30 **AT CONFERENCE CENTER** (Before the session, pages: 93-101 & 33-36)

- Identify products from the hive.
- Discuss pulling honey frames [e.g., bee brush w/2 covers, escapes, fume board & blower (& bee-vac)].
- Discuss extracting honey [crushed, cut comb & extractor (& hot & elec. knives, scratcher & no roller)]
- Discuss bottling.
- Discuss wax rendering.
- Discuss how to move hives.
- TO DO: I.P.M., monitor hives for pests such as varroa mites and hive beetles, treat if necessary.
- TO DO: Pull honey super if nectar/honey bound (or, if not, then surplus) for demo.
- TO DO: Optional date -- Remove hive and feed moved hives if not treating for mites.

### **"FALL" MANAGEMENT**

SESSION 12, AUGUST 13, **CONFERENCE CENTER** (Before the session, read text pages: 81-84)

- Review/Q&A prior sessions.
- Discuss formic acid treatment (MAQS -- Mite Away Quick Strips®).
- Discuss supering for fall honey.
- Discuss fall feeding for winter.
- Discuss what to do with nucs.
- TO DO: Check nucs (feed).
- TO DO: Inspect hive for mites and hive beetles, treat if necessary.
- TO DO: Remove hives and all related items.

**(STUDENTS MUST REMOVE THEIR RESPECTIVE HIVE AND ALL RELATED ITEMS FROM TOLLGATE EDUCATION CENTER. ANYTHING NOT TIMELY REMOVED (i.e., ABANDONED ITEMS) WILL BE AUCTIONED AT 9:00 P.M., WITH ALL OF THE PROCEEDS GOING TOWARDS COSTS, EXPENSES AND M.S.U.)**

### **"WINTER" MANAGEMENT**

SESSION 13, SEPTEMBER 10, **AT ACTIVITY CENTER** (Before the session, read text pages: 67-70)

- Discuss possible oxalic acid treatments
- Discuss getting ready for winter.
- Discuss overwintering hives.
- Discuss getting ready for next year including reviewing "to-do's" such as attending beekeeping seminars & club meetings, reading beekeeping journals, and ordering & constructing equipment.
- Discuss early spring and spring hive management
- General discussion.
- TO DO Reminder: At your location, remove treatments, if any, per label.