

## Beginning Beekeeping Course Outline<sup>1</sup> – 2023

**Objective:** *To provide the knowledge and resources for a person to become a beekeeper.*

Session	Date	Subject	Instructor
1	Jan 11	Introduction to Beekeeping	Robert Neal
		<ul style="list-style-type: none"> <li>○ Review Course Outline</li> <li>○ Brief history of honey bees and beekeeping in US</li> <li>○ Social order of a honey bee colony</li> <li>○ Stages of honey bee development – eggs, larvae, pupae</li> <li>○ Makeup of a bee’s home – comb, cavity, entrance, propolis, bee space</li> <li>○ Colony activity during a year – buildup, foraging, winter bees, clustering</li> <li>○ References, books, publications, organizations: NCSBA, CCBA, EAS, etc.</li> </ul>	
2	Jan 18	Equipment	Robert Neal
		<ul style="list-style-type: none"> <li>○ Basic hive components - bottom board, hive body, frames, queen excluder, honey super, inner cover and lid</li> <li>○ Hive variations – medium, Illinois, deep, shallow, top bar, flow hive</li> <li>○ Woodenware – types of wood, quality, joints, construction, painting</li> <li>○ Assembly - joining, nailing, gluing, maintaining bee space and critical dimensions, square, flush</li> <li>○ Considerations on initial hive components purchase – commonality, manufacturer compatibility, weight, construction, type of materials, costs</li> <li>○ Protective gear - veil, coveralls, and gloves</li> <li>○ Tools – hive tools (straight, j-hook), frame grips, smoker, spacers, brush, hive straps or staples</li> </ul>	
3	Jan 25	About the honey bee	Robert Neal
		<ul style="list-style-type: none"> <li>○ Eight species of honey bees in the genus Apis</li> <li>○ Twenty-four races in the species mellifera</li> <li>○ External/internal anatomy</li> <li>○ Pheromones</li> <li>○ Life stages</li> <li>○ Worker</li> <li>○ Drone</li> <li>○ Queen</li> </ul>	
4	Feb 1	The colony	Robert Neal
		<ul style="list-style-type: none"> <li>○ Division of labor</li> <li>○ Duties of the worker bee</li> <li>○ The drone</li> <li>○ The queen</li> <li>○ Superseding</li> <li>○ Swarming</li> <li>○ Colony activity during a year – buildup, foraging, winter bees, clustering</li> </ul>	

<b>Session</b>	<b>Date</b>	<b>Subject</b>	<b>Instructor</b>
5	Feb 8	Starting a Honey Bee Colony	TBD
		<ul style="list-style-type: none"> <li>○ Choosing a location – water source, direction of entrance, amount of sunlight, windbreak, accessibility, away from sidewalks/playgrounds /neighbors/public/vandals</li> <li>○ Setup site – hive components, install stand, level</li> <li>○ Hive type - full size, package, nuc, split, swarm, cutout, trapping.</li> <li>○ Feeding (different type feeders)</li> <li>○ Inspecting – queen right, drawing comb, sufficient food stores</li> </ul>	
6	Feb 15	Bees' enemies, pests, and diseases	Apiary Inspector
		<ul style="list-style-type: none"> <li>○ Mites – varroa, tracheal</li> <li>○ Diseases: <ul style="list-style-type: none"> <li>○ vectored from mites – acute bee paralysis, deformed wing virus, chronic paralysis virus (K-wing)</li> <li>○ Other diseases – nosema, European foulbrood, American foulbrood, chalkbrood, sacbrood</li> </ul> </li> <li>○ Small Hive Beetles</li> <li>○ Wax Moth</li> <li>○ Pesticides</li> <li>○ Other – ants, spiders, mice, hornets, wasps, dragonflies</li> </ul>	
7	Feb 22	Food and water for your bees	TBD
		<ul style="list-style-type: none"> <li>○ Flowering plants and trees (ID, bloom period)</li> <li>○ Feed and pollen substitutes (sugar, HFCS, pollen patties/substitutes)</li> <li>○ Natural and artificial water sources</li> </ul>	
8	Mar 1	Products of the hive	TBD
		<ul style="list-style-type: none"> <li>○ Bees</li> <li>○ Honey</li> <li>○ Comb honey</li> <li>○ Wax</li> <li>○ Pollen</li> <li>○ Propolis</li> <li>○ Royal jelly</li> <li>○ Apitherapy</li> </ul>	
9	Mar 8	Managing your bees	Robert Neal
		<ul style="list-style-type: none"> <li>○ Seasonal management – spring/fall</li> <li>○ Increasing/decreasing hive space</li> <li>○ Inspections –when, what to look for, internal, external</li> <li>○ Checking food stores</li> <li>○ Feeding</li> <li>○ Nectar (honey) flow</li> <li>○ Ventilation/moisture control</li> <li>○ Culling old comb</li> <li>○ Re-queening</li> <li>○ Pest prevention/control</li> <li>○ Harvesting honey surplus</li> <li>○ Robbing</li> </ul>	

Session	Date	Subject	Instructor
10	Mar 11	Field Day (4 hours at an apiary in the local area) <sup>1</sup>	Robert Neal
		<ul style="list-style-type: none"> <li>○ Light smoker and inspect a hive (first by an instructor and then by one or more of the students)</li> <li>○ Check for disease, check brood pattern and find the queen</li> <li>○ Identify a drone</li> <li>○ Identify eggs, young larvae, sealed worker brood, sealed drone brood, pollen and honey</li> <li>○ Show how to: <ul style="list-style-type: none"> <li>○ Check for Varroa mites</li> <li>○ Start a nuc</li> </ul> </li> <li>○ Show steps necessary in preparation for honey flow - add a queen excluder, add two or more supers, remove entrance reducer</li> <li>○ Demonstrate getting a hive ready for winter- include checking a hive for honey stores, feeding by several different methods, removing the queen excluder, providing upward ventilation and adding an entrance reducer</li> </ul>	

**Notes:**

- 1 Course outline, topics, and schedule are planned but are subject to change.
- 2 Classes meet on Wednesdays from 6:30PM to 8:30PM.
- 3 For the field day, each student should bring a veil and any other protective equipment they feel comfortable with while working bees. The smoker and hive tool will be provided. The location and starting time will be given during the class. Please note the Field Day will be on a Saturday. Rain date for the Field Day will be **March 18<sup>th</sup>** (also a Saturday).

**Directions:** Classes will meet in the basement of the Agriculture Services building (126 Court Square) next to the Historic Courthouse in downtown Yanceyville, NC. Please park and enter from the back of the building on the lower level. A Google map can be found on our web site at <http://caswellcountybeekeepers.org/directions/>.

Course information can be found at <http://caswellcountybeekeepers.org/bee-school/>. The web page will be kept updated and provide class changes or cancellations in case of emergencies, weather, or instructor availability.

Questions? Please e-mail [robertaneal@embarqmail.com](mailto:robertaneal@embarqmail.com) or call Robert Neal at (336) 514-0835.