

2018 Bee College Schedule

Friday, October 12th

		<i>Gordon Claus Teaching</i>					<i>Dadant and Sons, Inc.</i>			
	Rm 1031	Pavilion	Apiary	Apiary	Teaching Lab	Rm 2216	Rm 3118	Honey House	Workshop	
7:45-8:30	Registration (in front of Bee Lab)									
8:30-9:30	Honey Bee Basics* <i>J. Elmquist</i>	Making Splits <i>R. Horsburgh</i>	Making Splits (start in the Gordon Claus Teaching Pavilion)		What's Killing Honey Bees? <i>J. Ellis</i>	African and Africanized Honey Bees <i>T. Bustamante</i>	Research Update: Part 1: Molecular Markers for Apis Species Identification Part 2: Honey Bee Nutritional Research <i>Boardman & Noordyke</i>	How Bees Make Honey <i>M. Bammer</i>	Building Observation Hives <i>D. Hall</i>	
9:40-10:40		Beekeeping Equipment & How to Use It* <i>B. Stanford</i>	Walking Tour of the Honey Bee Lab <i>J. Ellis</i>	Honey Bee Nutrition (start in the Teaching Lab)	Honey Bee Nutrition <i>C. Fraccica</i>	Research Update: How Land Management Impacts Pollinator Communities <i>C. Kimmel</i>	Varroa Biology <i>C. Jack</i>	Small Scale Honey Extraction <i>R. Horsburgh</i>	Building Top Bar Hives <i>B. Sterk</i>	
10:40-11:00	Break (refreshments in front of Bee Lab)									
11:00-12:00		Brazilian Pepper Biological Control <i>C. Minter</i>	Installing Your First Colonies* <i>B. Stanford</i>		Collecting and Studying Pollen <i>E. Noordyke</i>	Understanding Pesticide Labels <i>B. Kern</i>	Research Update: Development of a Rearing System for Varroa Colonies <i>N. Egekwu</i>	Scaling Up: Honey Extraction for Sideline Beekeepers <i>B. Sterk</i>	Building Native Bee (and Wasp) Houses <i>J. Elmquist</i>	
12:00-2:00	Lunch (on your own)									
2:00-3:00	How Mites Should Be Treated: Varroa Management <small>Sponsored by the FL State Beekeepers Association</small> <i>S. Ramsey</i>	Catching and Hiving Swarms <i>B. Kern</i>	How To Work A Colony* <i>C. Fraccica</i>		All About Queens <i>D. Westervelt</i>	All About Queens <i>K. & M. Council</i>	Research Update: Identifying Honey Bees Using Morphometric Features <i>T. Bustamante</i>	Honey Under the Cottage Food Laws <i>B. Simmons</i>	A Journey in Beekeeping: From Sleps to Commercial Production <i>T. Saville</i>	
3:10-4:10	A Year in the Life of a Beekeeper* <i>T. Bustamante</i>	Understanding Swarming and How to Control It <i>R. Horsburgh</i>	All About Queens Practice <i>D. Westervelt</i>	Varroa Monitoring <i>M. Reed</i>	Research Update: Part 1: Small Hive Beetle Invasion Ecology Part 2: Varroa Sensitive Hygiene: Breeding and Biology <i>Cornelissen & Sheridan</i>	Updates from the Honey Bee Lab: MBP & More <i>M. Bammer</i>	Understanding Nosema <i>C. Jack</i>	Scaling Up: Honey Outside of Cottage Food <i>T. Hogg</i>	Beekeeping Liability Insurance <i>D. Hall</i>	

*Denotes the Beekeeping 101 classes for beginners

2018 Bee College Schedule

Saturday, October 13th

<div style="display: flex; justify-content: space-between; font-size: small;"> Gordon Clauss Teaching Dadant and Sons, Inc. </div>									
	Rm 1031	Pavilion	Apiary	Apiary	Teaching Lab	Rm 2216	Rm 3118	Honey House	Workshop
7:45-8:30	Registration (in front of Bee Lab)								
8:30-9:30	Common Pests of the Honey Bee <i>J. Ellis</i>	Making Splits <i>R. Horsburgh</i>	Making Splits (start in the Gordon Clauss TeachingPavilion)		Research Update: Oxalic Acid and Pesticide Research <i>C. Jack</i>	Understanding Native Bees: Biology and Behavior <i>R. Mallinger</i>	Honey Bee Basics* <i>J. Elmquist</i>	Collecting, Processing, and Rendering Wax <i>D. Hall</i>	Honey Bee Decline: A Historical Perspective <i>B. Cornelissen</i>
9:40-10:40	Common Diseases of the Honey Bee <i>J. Ellis</i>	Honey Bee Nutrition <i>C. Fraccica</i>	Honey Bee Nutrition (start in the Gordon Clauss TeachingPavilion)		Apiary Pest Control <i>B. Kern</i>	Crop Pollination by Bees <i>J. Elmquist</i>	Beekeeping Equipment & How to Use It* <i>B. Stanford</i>	Presenting Honey: Shows and Sales <i>K. Lausman</i>	Honey Bee Mating Biology <i>M. Bammer</i>
10:40-11:00	Break (refreshments in front of Bee Lab)								
11:00-12:00	Maintaining European Honey Bee Colonies <i>C. Fraccica</i>	Plants for Native Bees in Florida (with outdoor walking tour) <i>R. Mallinger</i>	Installing Your First Colonies* <i>B. Stanford</i>	Varroa Monitoring <i>M. Reed</i>	Knowing the Laws of Beekeeping in Florida <i>B. Simmons</i>	Research Update: Africanized Honey Bee ID Using Machine Learning <i>K. Bustamante</i>	Varroa Biology <i>J. Ellis</i>	Encaustic Painting with Beeswax <i>K. Brock Boger</i>	Research Update: Viruses on Wax and Propolis <i>H. Boncristiani</i>
12:00-2:00	Lunch (on your own)								
2:00-3:00	Varroa Control <i>C. Jack</i>	All About Queens <i>D. Westervelt</i>	How To Work A Colony* <i>W. Taylor</i>		Protecting Bees from Pesticides <i>B. Kern</i>	Prescription Antibiotics for Honey Bees <i>M. Bammer</i>	Drivers of Honey Bee Losses <small>Sponsored by the FL State Beekeepers Association</small> <i>S. Ramsey</i>	Making Creamed Honey <i>K. Lausman</i>	Managing Top Bar Hives <i>B. Sterk</i>
3:10-4:10	Teaching Bees to a Non-beekeeper Audience <i>C.Gill</i>	Understanding Swarming and How to Control It <i>B. Simmons</i>	All About Queens Practice <i>D. Westervelt</i>		Q&A Panel: Beginner <i>T. Bustamante</i>	A Year in the Life of a Beekeeper* <i>R. Mallinger</i>	How to Identify Florida's Native Bees <i>D. Hall</i>	Making Beeswax Candles <i>D. Hall</i>	Q&A Panel: Advanced <i>D. Hall</i>

*Denotes the Beekeeping 101 classes for beginners

Course Goals

Having goals for each class offered at Bee College allows you to know exactly what you are getting into as you choose which classes you would like to take. Refer to the goals below for each course to make sure that you get the most out of your Bee College experience! Classes are listed alphabetically.

After completing this course, you should be able to:

African and Africanized Honey Bees

Differentiate between African, Africanized, African-derived, and European honey bees.

Identify key differences in the behaviors of African-derived and European honey bees.

Know what to do if you encounter African-derived honey bees.

Recognize the Best Management Practices for reducing the spread of AHBs.

All About Queens

Differentiate between “good” and “spotty” brood patterns.

Explain common queen care techniques: clipping and marking.

Recognize when to requeen a colony.

All About Queens Practice

Differentiate between “good” and “spotty” brood patterns using actual frames.

Practice common queen care techniques: clipping and marking.

Practice requeening a colony.

Apiary Pest Control

Discuss how to deal with apiary pests outside the bee hives.

Identify methods that you can use to reduce the pressures of bee predators, such as ants, bears, skunks, mice, hornets, yellow jackets, and others.

Beekeeping Equipment and How to Use It

Identify the parts and functions of a Langstroth hive.

Describe the functions of key beekeeping items including a smoker, hive tool, and personal protective equipment.

Comfortably manipulate beekeeping tools and equipment

Beekeeping Liability Insurance

Recognize the place of liability insurance in beekeeping operations.

Discuss the beekeeping best management practices and Florida laws that could impact your liability as a beekeeper.

Determine if insurance is relevant to your beekeeping operation.

Brazilian Pepper Biological Control

Recognize Brazilian pepper’s place in the Florida honey bee industry.

Discuss current and future control options for Brazilian pepper.

Building Native Bee (and Wasp) Houses

Recognize how to attract native bees and wasps to your backyard.

Construct your own bamboo nesting box.

Identify how to properly maintain your nesting box.

Building Observation Hives

Recognize the benefits and uses of observation hives.

Work in teams to construct observation hives in class.

Building Top Bar Hives

Differentiate between top bar hives and standard Langstroth hives.

Recognize the benefits and uses of top bar hives.

Work in teams to construct top bar hives in class.

Catching and Hiving Swarms

Describe the various methods used to catch a honey bee swarm

Identify the types of lures that can be utilized in swarm trapping

Discuss the steps required to successfully hive a swarm

Collecting and Studying Pollen

Discuss how and why honey bees collect pollen.

Recognize how and why you can collect pollen from your colonies.

Identify how you can interpret pollen to better understand your bees.

Collecting, Processing, and Rendering Wax

Observe the process of collecting wax from hive frames.

Recognize the various methods of processing harvested beeswax.

Identify the numerous ways in which wax can be made into products.

Common Diseases of the Honey Bee

Identify the signs of the most common honey bee diseases: American foulbrood, European foulbrood, *Nosema*, chalkbrood

Recognize the prevention/control options for common honey bee pests.

Common Pests of the Honey Bee

Identify the signs of the most common honey bee pests: *Varroa destructor* (and associated viruses), small hive beetle, wax moth.

Recognize the prevention/control options for common honey bee pests.

Crop Pollination by Bees

Recognize the process of pollination and the role that bees play in it.

Identify what makes bees good pollinators.

Recognize how and when to place honey bee colonies to achieve adequate crop pollination.

Drivers of Honey Bee Losses

Recognize the highest reported causes of honey bee colony losses.
Identify which of these causes beekeepers can influence.

Encaustic Painting with Beeswax

Recognize how beeswax can be used to create works of art.
Identify techniques associated with encaustic art.
Practice encaustic techniques by creating your own painting.

Honey Bee Basics

Identify the functions of each honey bee caste in the colony.
Recognize the stages of honey bee development from egg to adult
List the resources that honey bees collect from out of the hive.

Honey Bee Decline: A Historical Perspective

Discuss the trends of winter hive mortality over the last few centuries.
Identify how/if the volume of colony losses today differ from what was seen in the past.

Honey Bee Mating Biology

Identify the role of reproductive in the honey bee colony.
Recognize how the honey bee sex determination system works.
Discuss the negative impacts of inbred honey bees on the colony.
Recognize how honey bees have evolved to reduce inbreeding and increase genetic diversity.

Honey Bee Nutrition

Indicate the nutritional needs of honey bees
Interpret trends in nectar and pollen dearths in Florida
Determine when a colony is low on food resources
Recognize that most colonies need to be fed at certain times of the year

Honey Under the Cottage Food Laws

Recognize the rules surrounding bottling, selling, and labeling honey and other hive products under the Florida Cottage Food Laws.
Identify how you can use the Florida Cottage Food Laws to your advantage in small scale honey production and sales.

How Bees Make Honey

Recognize the importance of honey to honey bee survival.
Describe the process of how bees make honey.
Indicate how beekeepers can increase colony honey production.

How Mites Should Be Treated: *Varroa* Management

Identify the various types of treatments available for *Varroa* including chemical and cultural.
Recognize how one beekeeper's action (or lack of action) against mites can impact the greater beekeeping community.

How to Identify Florida's Native Bees

Differentiate between the main subgroups of native bees in Florida.

Use physical characteristics to identify bees to family, genus, or species

How to Work a Colony

Identify the key attributes to look for when working your colony.

Recognize how to correctly move through a honey bee colony.

Installing Your First Colonies

Identify the pros and cons of using a package or a nuc for a new hive,

Recognize the steps required to hive a package.

Recognize the steps required to move bees from a nuc to a full hive.

Discuss the ways in which a newly installed hive must be cared for.

Journey in Beekeeping: From Skeps to Commercial Production, A

Illustrate an example of one woman's journey into beekeeping.

Identify how alternative hives can fit in varied beekeeping operations.

Knowing the Laws of Beekeeping in Florida

Recognize the importance of mandatory apiary registration in Florida.

Identify the rules surrounding apiary location and maintenance in FL.

Discuss how recent rule changes may affect your beekeeping operation.

Maintaining European Honey Bee Colonies

Recognize the Florida Best Management Requirements/Practices for keeping Africanized honey bees out of your apiary.

Identify options for requeening colonies to ensure that you are keeping European honey bees.

Making Beeswax Candles

Recognize how to properly melt beeswax for use in candles.

Discuss how to properly use molds when making beeswax candles.

Identify alternative candle and wax options.

Making Creamed Honey

Identify the steps needed to make creamed honey.

Recognize the use of creamed honey as a value-added hive product.

Making Splits

Practice the steps of splitting a colony.

Identify the possible problems you could encounter when making a split.

Managing Top Bar Hives

Differentiate between the structure of Langstroth and top bar hives.

Recognize how top bar hives require different management practices.

Identify resources for further education in top bar hive beekeeping.

Plants for Native Bees in Florida (with outdoor walking tour)

Identify Florida flowering plants that provide good resources for bees.

Evaluate plant attractiveness to bees based on general plant traits.

Understand best management practices for planting and maintaining pollinator/bee gardens

Prescription Antibiotics for Honey Bees

Recognize the FDA ruling that has required certain honey bee antibiotics to require a veterinarian,

Identify the honey bee antibiotics that are affected.

Discuss the status of foulbrood and its control in Florida.

Explore the current solution that is being used in Florida.

Presenting Honey: Shows and Sales

Discuss the process of preparing different classes of honey for submission to a honey show or for sales.

Consider what messages you send to your customers when they see your honey/products.

Protecting Bees from Pesticides

Discuss how toxicity and exposure effect how bees may be impacted by pesticides.

Identify ways that all pesticide users can reduce the likelihood of bee exposure to pesticides.

Q&A Panel: Beginner and Advanced

Get your honey bee/beekeeping questions answered by experts. There are two separate question and answer sessions: one for beginner beekeeping questions and one for more advanced questions.

Research Updates (multiple classes and topics)

Encounter new and upcoming research in the honey bee industry.

Become a more effective consumer of scientific research.

Scaling Up: Honey Extraction for Sideline Beekeepers

Recognize ways in which you can scale up your honey production.

Observe and practice the process of extracting honey at a large scale.

Scaling Up: Honey Outside of Cottage Food

Recognize the state and federal requirements you must consider when transitioning from Cottage Food production to a permitted processor.

Identify the equipment you will need to scale up honey production.

Discuss how to maintain inventory and a quality product while growing your honey business.

Small Scale Honey Extraction

Determine when honey can/should be extracted from a colony based on season and hive conditions.

Observe and practice the process of extracting honey from frames on a small scale.

Teaching Bees to a Non-beekeeper Audience

Recognize how the context of a presentation can affect content delivery.

Identify ways to focus on key aspects of bees and beekeeping when presenting to a beginner audience.

List ways in which visual displays can help or hinder learning.

Understanding Native Bees: Biology and Behavior

Discuss the various types of pollinators found in Florida

Recognize the importance and diversity of Florida's wild bee species.

Describe the biology and life history of major bee groups.

Understanding *Nosema*

Identify the lifecycle of *Nosema* in the honey bee colony.

Recognize when and how *Nosema* show up in honey bee colonies.

Discuss the impacts of *Nosema* in the honey bee colony.

Understanding Pesticide Labels

Distinguish between acute and chronic pesticide toxicity.

Identify pesticide label language regarding pollinator protection.

Interpret how a pesticide should be used based on its label.

Understanding Swarming and How to Control It

Identify the factors that can stimulate a colony to swarm

Recognize five ways to help prevent honey bee swarming such as, provide adequate brood space, equalize colonies, create splits, clip queens, and requeen.

Updates from the Honey Bee Lab: Master Beekeeper Program and More

Explore the new requirements and online course of the UF Master Beekeeper Program.

Identify the UF Honey Bee Lab resources that are available to you.

Receive an update on the lab's current programs and plans for the future.

***Varroa* Biology**

Identify the lifecycle of *Varroa* destructor in the honey bee colony.

Recognize when and how *Varroa* show up in honey bee colonies.

Discuss the impacts of *Varroa* in the honey bee colony.

***Varroa* Control**

Recognize the various types of treatments available for *Varroa* including chemical, mechanical, and cultural.

Identify how and when to use common *Varroa* treatment/control products in your colonies.

***Varroa* Monitoring**

Discuss the importance of regular monitoring for *Varroa*.

Practice the two most effective techniques for monitoring *Varroa* in your colonies.

Interpret *Varroa* counts and recognize treatment thresholds in your colonies.