Natural Beekeeping: Integrating Honey Bee Ecology into Modern Beekeeping

Available for 2 undergraduate credits through the University of Montana Division of Biological Sciences as BIOB 277 Natural Beekeeping.

Instructor

Dr. Scott Debnam

Location

The course is taught online through Moodle, the University of Montana's online learning system.

Prerequisite

Registration for the Natural Beekeeping course is open to those who have successfully completed UM's Apprentice-Level Beekeeping Course or received instructor consent to skip the Apprentice course.

Course Description

The point of this course is to introduce a method of beekeeping that, as best we can, emulates how bees naturally occur in nature, while at the same time promotes the practices that qualifies us as beekeepers, not just people with a hive in the back yard. **It is "OK" to keep bees for the sake of keeping bees.** Keeping bees just to watch them, or enjoy the sounds the colony makes, and to promote bee presence in your garden are wonderful reasons to keep bees and they are just as valid a reason to keep bees as keeping them for their products. This short course is designed to introduce the beekeeper to a method of beekeeping that is simply for the sake of having bees.

The course is equivalent to 20 hours of instruction over the course of 5 weeks. Participants should allow 3-4 hours per week for participation in the course, study time, and reading.

Required Textbooks & Equipment

The Lives of Bees: The Untold Story of the Honey Bee in the Wild

Thomas Dyer Seeley, Princeton University Press 2019
ISBN: 9780691189383

The textbook is available through Amazon.com or BarnesandNoble.com or other retailers.

Other materials will be provided in class as needed.

Grading Method

All participants must earn 70% or higher overall to receive a certificate of completion for the course and 2.0 CEUs. Students are graded on overall participation in the weekly discussion forums, four exams, one written assignment, a comprehensive final exam, and a final video practicum.

Activity	Points
Forum Participation (4)	300
Weekly Exams (2)	200
Writing Assignment	100
Final Comprehensive Exam	300
Total Points	900

Academic credit students will be assigned traditional letter grades using the following scale:

>93%	A
92-90%	A-
89-87%	B+
86-83%	B
82-80%	B-
79-77%	C+
76-73%	C
72-70%	C-
69-67%	D+
66-60%	D
<60%	F

Intellectual Property and Copyright
This course is protected by copyright and is the intellectual property of the University of Montana and the beekeeping faculty. These materials are not to be distributed or disseminated without their express written permission.

Academic Honesty
Plagiarism is defined as misrepresenting another's work, words, or ideas as one's own. Be aware that submitting plagiarized work is subject to an academic penalty by the course instructor as described in the UM Student Conduct Code.

Accessibility

This course was designed to be fully accessible and meets the requirements of the University of Montana Electronic and Information Technology Accessibility Policy. The University of Montana assures equal access to instruction. Students with disabilities may request reasonable modifications by contacting an instructor or by calling Student Support Services at 406.243.6495. By "reasonable," the University means that no fundamental alterations of academic standards or retroactive modifications will take place.

Course Schedule

Course schedule is subject to change. Due dates for assignments and exams will be announced in class.

The course will be delivered in four sections which have been drastically altered in modern beekeeping practices:

1. Natural Beekeeping Overview
2. How the Nest Occurs Naturally
3. How the Nest is Managed
4. How the Colony Reproduces

These sections will be further broken into two sub-sections; 1) we will be looking, of course, at how bees behave naturally and then 2) we will see how our behavior as their keepers can be altered to better match what is occurring naturally.

Section 1: Natural Beekeeping Overview

- We will establish some definitions and develop an understanding of some of the strengths and benefits of keeping honey bees in a more natural way.
- We will also discuss some of our preconceived notions about Natural Beekeeping.
- No exam. Instead, there will be a short forum essay required from each student.

Section 2: How the Nest Occurs Naturally

A look at how honey bees build a nest without us and some of the modifications that we can apply to our hives in order to more closely mimic a natural nesting honey bee colony.

- We will discuss how the bees nest naturally.
- We will be modifying a Langstroth hive for Natural Beekeeping.
- I will then provide a demonstration of how to introduce a colony into our modified Natural Beekeeper's hive.
- There will be an essay assignment at the end of this section.

Section 3: How the Nest is Managed

Here, we will look into altering our management techniques and focus, and not manipulation for profit. We will reduce interactions and micromanagement of honey bee colonies.

- We will discuss management alterations.
- I will demonstrate an inspection of a natural beehive.

- We will discuss, in detail, how naturally nesting populations of honey bee colonies develop resistance to disease and pests as well as a method for replicating this process in our colonies.
- There will be an exam at the end of this section.

Section 4: How the Colony Reproduces

Finally, we will take a look at colony reproduction.

- We will discuss the two reproductive members of the honey bee family and how we manage their role in colony reproduction.
- We will discuss options for swarm control that are available to the Natural Beekeeper.
- I will demonstrate how to build a swarm bait hive.
- I will demonstrate how to make a Walkaway split.
- There will be an exam at the end of this section.

Section 5: Final Exam

There will be no new material this week. Instead, we will be preparing for the final exam.

- Final exam