

Certificate in Therapeutic Horticulture Handbook

August 1, 2024 – April 26, 2025

Engaging with Plants and Nature to Improve Human Health & Wellbeing



North Carolina Botanical Garden

ncbg.unc.edu

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Indigenous Land Acknowledgement

The lands we steward are the ancestral homeland of several Siouan-speaking tribes and a part of the recognized home of the Occaneechi Band of the Saponi Nation. We celebrate the many Native people, who, to this day, meet, gather, walk, hike, and engage with the habitats and gardens on this land, and we honor their Native ancestors and Elders, past, present, and future.

We are grateful for the engagement of Indigenous people with the Garden across its history and strive to be of continued value to all Native communities in North Carolina. We invite you to join us in learning the history about the land we each steward and supporting Native artists and entrepreneurs and organizations advocating for American Indian communities, such as the UNC American Indian Center. *For more information on the history of the land the North Carolina Botanical Garden stewards, prior to the Garden's existence, see <https://ncbg.unc.edu/about/diversity-equity-inclusion/land-acknowledgement/>.*

Foreword

The North Carolina Botanical Garden (NCBG) is pleased to offer the Hybrid Certificate in Therapeutic Horticulture (HCTH), which provides comprehensive therapeutic horticulture training to professionals and students in allied health, education, and design fields. This certificate is a strong credential for those interested in incorporating therapeutic horticulture into their chosen field of work. It is our hope that each student who completes this program will come away with the knowledge, practical expertise, and confidence to make therapeutic horticulture a living, thriving therapeutic modality in the communities we serve.

NCBG is a university-affiliated botanical garden with an outstanding reputation as a garden that integrates a conservation ethic into all of its programs. We are the region's most comprehensive center of knowledge on plants in North Carolina and the southeastern United States, and we provide a broad audience with inspirational experiences, opportunities for health and wellness through outdoor activities, and educational programs within a scientifically based institution. It is the Garden's vision to have a profound influence on how people value and interact with the environment and the biologically diverse world.

The Garden's mission is:

"To inspire understanding, appreciation, and conservation of plants in gardens and natural areas and to advance a sustainable relationship between people and nature."

The Certificate in Therapeutic Horticulture expands this mission with its goals:

1. To provide a balanced curriculum of both therapeutic horticulture practices and traditional horticultural knowledge that enables graduates to use plants and nature to improve human health and wellness.
2. To expand the field of therapeutic horticulture, so more people in various settings and situations can have access to this unique and dynamic therapeutic treatment method.

The Certificate in Therapeutic Horticulture awards a certificate of 'mastery' for students who successfully meet the following criteria:

1. Watch/complete all assigned online lectures & assignments. (2-4 hrs./mo.)
2. Attend 6 out of 7 in-person monthly workshops at the NC Botanical Garden.
3. Complete the final written practicum, a compilation of several open-book assignments.
4. Complete 8 volunteer hours in a community-based garden setting(s) during the 9-month program (August 2024 - April 2025).

Upon completion of the program, students will have learned the following:

- Historical and current uses of therapeutic horticulture, research findings to support its efficacy, and the wide range of fields that interface with the therapeutic horticulture profession.
- How to assess the needs of sites and populations, develop meaningful goals, and design plant and nature-based activities that meet client-centered goals.
- How to develop, facilitate, and manage a TH program. Roles and responsibilities of a TH program manager.
- Tools and methods for adapting, modifying, and delivering plant and nature-based activities for people of varying abilities and needs.
- Fundamentals of horticulture, including starting seeds, asexual propagation; vegetable, herb, flower, and indoor plant gardening; how to build good soil; and plant diseases and pests.
- How therapeutic horticulture complements other treatment options in clinical and non-clinical (community) settings. Interdisciplinary collaboration/treatment.
- Business considerations when developing a therapeutic horticulture program including budget, billing, purchasing, and program evaluation.
- How to communicate and market a TH program narrative/services.
- How to integrate principles of diversity, equity, and inclusion into TH practice.
- Universal Design and environmental accessibility principles/features that enable participant participation and empowers barrier-free access.
- The fundamentals of garden/therapeutic garden design and indoor programming site setup/design.

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1. INTRODUCTION

1.1 WHO SHOULD APPLY?

Are you...

- Invested in human health and want to incorporate the healing effects of plants and the natural world into practice?
- Looking for ways for clients to increase creative ventures and connections to plants and their environment?
- Eager to build confidence and enhance understanding of therapeutic horticulture?
- Interested in connecting with like-minded people and professionals who share your passion?

If any of this sounds familiar, you are in the right place.

The Certificate in Therapeutic Horticulture is designed for:

- Working professionals in allied health fields such as: Occupational Therapy, Physical Therapy, Recreational Therapy, Social Work, Psychology, Rehabilitation Counseling, or other related allied health occupations
- Working professionals in allied education fields such as: K-12 education, college educators, teachers of exceptional children, etc.
- Working professionals in allied design fields such as: Landscape design/architecture, urban planning & development, etc.
- Current students in the above fields
- Graduated students in the above fields not yet working in their fields

*No previous horticulture knowledge is required.

Note: Please contact the NCBG Therapeutic Horticulture Program Manager Emilee Weaver: erweaver@unc.edu, if your field is different from those outlined above and you'd like to be considered for the program.

1.2 BENEFITS OF THE NCBG CERTIFICATE IN THERAPEUTIC HORTICULTURE

For 50 years the North Carolina Botanical Garden has served the public through courses in botany, horticulture, botanical art, native plants, conservation, and related fields. Since 1978, the Horticultural Therapy Program within the Education Department has offered one-day trainings introducing the field of therapeutic horticulture. Feedback has pointed to a growing interest in more in-depth courses in therapeutic horticulture.

Furthering our commitment to advancing the profession of Therapeutic Horticulture and responding to expressed interest, we are delighted to offer an accessible and comprehensive program. We believe strongly in the benefits of therapeutic horticulture for individuals and communities and are invested in growing the practice.

Accessible

Becoming a registered Horticultural Therapist with the American Horticultural Therapy Association (AHTA) is an extensive process requiring horticultural therapy courses, plant science and human science courses from accredited colleges or universities, and a 480-hour internship. NCBG's Hybrid Certificate in Therapeutic Horticulture (HCTH) offers an alternative educational opportunity to working professionals and students. Courses are offered online and in-person on weekends.

This certificate is NOT accredited by the American Horticultural Therapy Association, nor supports the AHTA registration process. HCTH is designed to enhance trained professionals in their field of practice.

Comprehensive

During this nine-month program, students will receive approximately 2-4 hours of pre-recorded lectures each month that cover a wide variety of TH topics. There is no limit to the number of times students can listen to the lectures, and they can be accessed 24/7 on our online learning platform. On the second Saturday of each month (except December and April-see course schedule), we will meet as a group at the North Carolina Botanical Garden and discuss the lecture content, participate in hands-on activities that reinforce the online content, network with classmates and instructors, and attend field trips to therapeutic horticulture programs that are local to the Garden.

Instructors for these workshops include AHTA registered horticultural therapists, practicing therapeutic horticulture practitioners, NCBG horticulture staff, allied health professionals, and other accomplished experts in their respective fields. The program concludes with a take-home practicum that demonstrates proficiency in several foundational TH skills.

1.3 WHAT IS THERAPEUTIC HORTICULTURE?

Therapeutic horticulture is the use of plants and plant-related activities to promote emotional, physical, spiritual, vocational, cognitive, and social well-being for clients. Participants' involvement with plants can be active (for example, engaging in gardening activities such as planting seeds or pruning plants) or passive (for example, walking or sitting in a garden setting). Therapeutic horticulture is facilitated by a registered horticultural therapist or other professionals trained in the use of horticulture as a therapeutic tool.

Benefits of therapeutic horticulture include physical activity, relaxation and enjoyment, skill development, creative expression, sensory stimulation, intellectual and personal growth, social interaction, and a spiritual connection with life. Therapeutic horticulture has been used to support;

- ❑ **MENTAL HEALTH GOALS** such as reducing stress and tension, diminishing anger, improving mood, developing coping skills, enhancing personal responsibility, fostering hope, learning to work independently.
- ❑ **SOCIAL GOALS** such as improving the ability to work with others, improving communication skills, reducing social anxiety, reducing irritability and aggressiveness.
- ❑ **COGNITIVE GOALS** such as learning new skills, regaining lost skills, improving memory, improving ability to initiate tasks, improving attention to detail.
- ❑ **PHYSICAL GOALS** such as improving coordination, retraining muscles, improving balance, improving strength.

Therapeutic horticulture is practiced in varied settings including rehabilitation programs, psychiatric and mental health facilities, hospitals, correctional facilities, schools, nursing homes and senior centers, and community and botanic gardens. People who benefit from therapeutic horticulture include adults and children with physical, psychological, and developmental disabilities, those recovering from illness or injury, people wishing to improve their quality of life in hospice or nursing home settings, persons who have experienced abuse and their abusers, public offenders, and those recovering from addiction.

2. GENERAL PROGRAM INFORMATION

Successful completion of the program requires viewing all online lectures, attendance of 6 out of 7 in-person workshops, occasional homework, passing a final take-home practicum, and completing 8 volunteer hours in a plant-related setting. Course scheduling is designed for graduation within a 9-month period.

Contact

Therapeutic Horticulture Program Manager - Emilee Weaver

Director of Learning & Community Engagement - Joanna Massey Lelekacs

ncbg.unc.edu/certificate-programs/

Phone (General): (919) 962-2413

2.1 PROGRAM POLICY

NCBG reserves the right to adjust the course schedule or substitute faculty. Policy and procedure will be revised with new versions of the program.

2.2 COURSE CALENDAR

August 1, 2024 – April 26, 2025

*See section 4.2

Courses will be listed on the NCBG website under, “Hybrid Certificate in Therapeutic Horticulture”: ncbg.unc.edu/certificate-programs/. It is also listed on pages 17-18 of this handbook. Please note: No in-person workshop will be conducted in December 2024 and the April 2025 in-person workshop will be held on the fourth Saturday of the month.

2.3 PROGRAM REGISTRATION

Students must be at least eighteen years of age and meet requirements detailed in Section 1.1 “Who Should Apply?” of this Handbook.

Successful registration will be dependent on both the order in which the registration form is completed and suitability for the program. Maximum enrollment is 20. Upon reaching 20 enrolled students, a waitlist will be created. Registration will open on December 4, 2023.

The link to register will be available on the NCBG website under “Certificate in Therapeutic Horticulture”: ncbg.unc.edu/certificate-programs/

2.4 PAYMENT OPTIONS

Registration opens: December 4, 2023

Registration closes: July 15, 2024

Registration Dates		Payment Plan	Initial Payment	Payment Due May 31, 2024	Payment due July 31, 2024
Early Bird	Register by February 29, 2024	Pay in full	\$1,750.00	n/a	n/a
		Pay in two installments	\$875.00	n/a	\$875.00
		Pay in three installments	\$500.00	\$625.00	\$625.00
Regular	Register on or after March 1, 2024	Pay in full	\$1,850.00	n/a	n/a
		Pay in two installments	\$925.00	n/a	\$925.00
Late	Register after June 1, 2023	Pay in full	\$2,150	n/a	n/a

2.5 REFUND POLICY

If a class is cancelled due to insufficient enrollment or has been filled prior to receipt of your payment, you will be notified, and your payment will be refunded in full.

- Cancellations made on or before June 1, 2024 will be issued a refund minus a \$200 administrative fee
- Cancellations made after June 1, 2024, but prior to July 31, 2024 will be issued a refund minus a \$500 administrative fee
- No refunds will be issued for cancellations made on or after July 31, 2024

Questions? Contact the Registrar at ncbregistrar@unc.edu or 919-962-4882.

2.6 SCHOLARSHIPS

NCBG will grant four need-based partial-scholarships. These scholarships will cover 65% of the program costs, requiring scholarship-recipients to pay a total of \$650.00 for the program. Submission of the application does not guarantee that a student will receive the scholarship.

The scholarship application will be posted on the NCBG website (ncbg.unc.edu/certificate-programs/) on December 4, 2023. Students must submit the application **before 12 a.m. on February 29, 2024**. Applications will be submitted by email to Emilee Weaver (erweaver@unc.edu). Applications received after 12 a.m. on March 1, 2024, will not be considered. All applicants will be informed whether they were or were not selected for the scholarships by March 15, 2024.

2.7 ENROLLMENT CONFIRMATION

Confirmation of program registration will be sent via email upon completion of online registration as well as for any payments made.

2.8 CANCELLATION POLICY

In case of inclement weather, or if an in-person class is cancelled for any other reason, students will receive an email by 8:00am the morning of the scheduled class. Every effort will be made to inform students of a cancelled in-person class with as much advance notice as possible.

2.9 ATTENDANCE POLICY

To receive a certificate of mastery, students are permitted one in-person class absence, or a total of 6 hours. If a student is absent for more than one class (6 hours), they may continue in the program attending classes; however, they will not receive a certificate.

If extenuating circumstances require additional absences, allowances will be considered at the discretion of the Director of Learning & Community Engagement in consultation with the course instructor.

Before registering for this program, PLEASE ensure that you'll be able to attend at least 6 of the 7 scheduled in-person workshops. To accommodate winter holiday schedules, no in-person workshop will be held in December 2024, but online content will still be assigned during this month. Also note, the final in-person workshop will be held on April 26, 2025, which is the fourth Saturday of the month.

2.10 SUPPORTIVE MATERIAL

While outside reference material is not required for purchase in order to enroll in or complete the certificate program, we strongly advise that you acquire one of the following texts. These provide foundational information for therapeutic horticulture, and they will be useful references as you integrate therapeutic horticulture into your practice.

1. *The Profession and Practice of Horticultural Therapy*, Haller, Kennedy and Capra eds., 2019
2. *Horticulture as Therapy, Principles and Practices*, Simson and Straus eds, 1998
3. *Horticultural Therapy Methods: Making Connections in Health Care, Human Services, and Community Programs*, by Haller and Kramer eds., 2006

An extensive bibliography of useful reference material will be presented during the first class. Individual teachers may recommend other reference materials.

3. Program Completion

3.1 PROGRAM COMPLETION REQUIREMENTS

To receive a certificate upon completion of the program, you must complete the following requirements by April 26, 2025.

ACTIVITY	COMPLETION REQUIREMENT	DEADLINE
Online lectures	Watch all online lectures	April 26, 2025
In-person classes	Attend 6 out of 7 monthly in-person classes	
Service Learning	Complete and document 8 hours of volunteer service in a plant-related setting	
Practicum	Pass the final take-home practicum	By 11:59 p.m. on April 25, 2025

3.2 VOLUNTEER EXPERIENCE

The intent of completing volunteer hours is to provide students with a service-learning opportunity that is directly related to the mission of the HCTH and applies the knowledge gained in the coursework. A minimum of 8 hours of direct service learning is required. It is highly recommended that most volunteer hours are completed in warmer months (Aug.-Nov. and/or Mar.-Apr.). Students will independently establish a relationship with one or more volunteer site(s) of their choosing and complete their hours outside of scheduled HCTH workshop dates.

On the following page, we have provided a list of volunteer opportunities that are local to Chapel Hill and surrounding areas. Students are welcome to find their own volunteer opportunities at sites that interest them.

Getting Started

- **Develop a proposal**

Determine which volunteer site(s) you would like to volunteer with and establish who will serve as your site advisor during your service.

- **Submit your proposal**

Complete the Service-Learning Volunteer Hours Proposal form in the following section and submit it to the NCBG Therapeutic Horticulture Program Manager. You will be notified by email when your proposal has been approved, and you can begin your volunteer service.

- **Volunteer service**

Complete your proposed service. Provide documentation to the NCBG Therapeutic Horticulture Program Manager that states the location, number of hours served, and the tasks that were completed and have the log verified and signed by the site supervisor / administrator (a form will be provided). Volunteer hours and corresponding documentation must be submitted by April 26, 2025.

Potential Volunteer Sites

- [North Carolina Botanical Garden](#)
- [American Community Gardening Association \(locate a garden near you!\)](#)
- [Carolina Community Garden](#)
- [Carrboro Farmers' Market](#)
- [Durham Farmers' Market](#)
- [Durham Public Schools Hub Farm](#)
- [Farm at Penny Lane](#)
- [JC Raulston Arboretum](#)
- [Sarah P. Duke Gardens](#)
- [Transplanting Traditions](#)
- Volunteer opportunity of own choosing, approved by instructor

Note: Several of these volunteer sites offer weekday and/or weekend opportunities.

Hybrid Certificate in Therapeutic Horticulture
3.3 Service-Learning Volunteer Hours Proposal



Name _____ *Date* _____

Email _____ *Phone Number* _____

Proposed Volunteer Hours:

Volunteer Site _____

Volunteer Supervisor Name _____

Supervisor Email _____

Please provide a paragraph or two detailing the types of tasks you plan to undertake in your volunteer service-learning:

3.4 PROGRAM COMPLETION DEADLINES

Students must have completed all online lectures, in-person workshops, and volunteer service hours by April 26, 2025. The final take-home practicum assignment will be explained, and its guidelines will be provided at the first in-person workshop on September 14, 2024. The practicum is due to Emilee Weaver erweaver@unc.edu by 11:59 p.m. on April 25, 2025 (the day before the last in-person workshop). Upon receipt of volunteer service documentation and satisfactory final practicum, notification will be sent to the student and a certificate of mastery will be emailed/mailed by May 16, 2025.

4. CURRICULUM

4.1 COURSE LISTING & CONSOLIDATED SCHEDULE

The curriculum provides instruction in achieving academic proficiency and understanding of the concepts and practice of therapeutic horticulture. The online and in-person elements of the program are delineated in the schedule. The 'opens' date listed for the online content indicates the day that the lectures will be available in the online learning platform 'Padlet' for review each month. Once online content has been opened to students, access remains open for the duration of the program and can be viewed 24/7.

See course schedule on next page.

2024/25 Hybrid Certificate in Therapeutic Horticulture Schedule

	Date	#	Class Title	Time	Hrs.
September	ONLINE CONTENT Opens: Aug. 1, 2024		Introduction to Therapeutic Horticulture (Historical and Theoretical Overview)	Self-Paced	2
	IN-PERSON Saturday Sept. 14, 2024	1	Program Manager & Student Introductions	9am-12pm	3
		2	Off-Site Field Trip- TBA	1pm-4pm	3
October	ONLINE CONTENT Opens: Sept. 16, 2024		Principles of TH Site & Participant Assessment	Self-Paced	4
	IN-PERSON Saturday Oct. 12, 2024	3	Population Adaptation Workshop	9am-12pm	3
		4	Off-Site Field Trip- TBA	1pm-4pm	3
November	ONLINE CONTENT Opens: Oct. 14, 2024		Treatment Goal Development Principles of Site Safety	Self-Paced	4
	IN-PERSON Saturday Nov. 9, 2024	5	Adaptive Tools & Techniques Workshop	9am-12pm	3
		6	Off-Site Field Trip- TBA	1pm-4pm	3
December	ONLINE CONTENT Opens: Nov. 11, 2024		TH Activity Development & Facilitation	Self-Paced	2.5
	NO December In-Person Workshop	7	TH Activity Labor & Materials Calculation Assignment	Self-Paced	N/A
January	ONLINE CONTENT Opens: Dec. 16, 2024		TH Basic Horticulture Skills Raised Bed & Container Gardening	Self-Paced	2
	IN-PERSON Saturday Jan. 11, 2025	8	Herbal Harmony: Cultivating Wellness with Seven Essential Herbs	9am-12pm	3
		9	'Plantcestors' Workshop	1pm- 4pm	3

2024/25 Hybrid Certificate in Therapeutic Horticulture Schedule

	Date	#	Class Title	Time	Hrs.
February	ONLINE CONTENT Opens: Jan. 13, 2025		Planning, Purchasing & Production Strategies for Plant Sales and TH Activities	Self-Paced	2
	IN-PERSON Saturday Feb. 8, 2024	10	Seed Propagation Methods	9-10:30 am	1.5
		11	Vegetative Propagation Methods	10:30am-12pm	1.5
		12	On-Site Indoor Plant Propagation Workshop	1pm-4pm	3
March	ONLINE CONTENT Opens: Feb. 10, 2025		Introduction to Universal Design Intro to Vegetable/Flower/Therapeutic Design	Self-Paced	3
	IN-PERSON Saturday Mar. 8, 2025	13	Garden Design Workshop	9am-12pm	3
		14	Fundamentals of Soil & Growing Media	1-2:30pm	1.5
		15	Managing Pests, Diseases, and Weeds	2:30-4pm	1.5
		ONLINE CONTENT Opens: Mar. 10, 2025		Developing TH Program Budget & Marketing	Self-Paced
IN-PERSON Saturday Apr. 26, 2025	16	TH Program Proposal Presentations	9am-12pm	3	
	17	TH Panel of Practitioners Q&A Session	1pm-3pm	2	
NCBG			TH Ceremony & Reception	3pm-4pm	1

4.2 HOMEWORK ASSIGNMENTS

Students may be assigned homework at the discretion of the course instructor. If a student is absent from a workshop, they will be responsible for obtaining course materials to ensure successful program completion. To receive credit for participation students must participate during the workshops and complete in-class assignments.

4.3 STANDARDS FOR GRADES

All measures of program completion will be done on a pass/fail basis. No grades will be assigned.

4.4 CLASS DESCRIPTIONS AND OBJECTIVES

Class 1. NCBG Program Manager & Student Introductions

Instructor: Emilee Weaver, HCTH Program Manager

Workshop Description: Let's get to know one another! As a group, we'll learn each other's professional/personal backgrounds and motivations for joining NCBG's TH Certificate program through team building activities and engage in a brief orientation of the TH program and NCBG!

Class 2. Field Trip - TBA

Off-site field trip. Address/directions will be provided in class.

Class 3. Population Adaptation Workshop

Instructors: Amy Stidham & Emilee Weaver

Workshop Description: Students will build upon the online lecture content from the previous month and gain real- life examples of how to successfully provide direct TH services with individuals/groups who have physical, cognitive, and/or psychological impairments. We will explore the process of planning and adapting activities for these populations together. Instructors will present general characteristics, teaching aids, and communication strategies, but most of our time will be spent participating in hands-on planting activities, exploring the TH practitioner role and the effects of various symptoms on participants.

Learning Objectives: Upon completion of this workshop, students will have an understanding of the following:

- Ideas for ways to plan and lead TH activities that target specific outcomes.
- Goals and challenges within the stated populations.
- Instructional techniques that will adapt TH activities to the needs of people with diverse and sometimes complex needs.
- What it feels like to conduct a TH activity with a participant who experiences a variety of symptoms.

Class 4. Field Trip - TBA

Off-site field trip. Address/directions will be provided in class.

Class 5: Adaptive Tools & Techniques Workshop

Instructors: Amy Bruzzichesi MSW, Greg Stivland OT Workshop Description:

Workshop Description: Students will have the opportunity to apply the use of adaptive tools and techniques to real-world TH scenarios and populations. This course will be an active, hands-on workshop that places students in the role of the 'participant' as well as 'practitioner' so they have a firsthand account of what it feels like to be a TH participant who requires adaptive tools and techniques as well as consider the need for adapting tools and activities for TH clients. A thorough tool demonstration and recommendations for commonly used adaptive techniques will be provided.

Learning Objectives: Upon completion of this workshop, students will be able to:

- Identify 3 or more ways a Therapeutic Horticulture activity can be adapted.
- Identify why and how you might need to adapt a TH activity.
- Identify why and how you might need to adapt the environment when working with a client on a TH activity.
- Identify why/when adapted tools might be needed to complete a TH activity.
- Identify resources (online/books) to learn more or to purchase adaptive tools.

Class 6. Field Trip - TBA

Off-site field trip. Address/directions will be provided in class.

Class 7: TH Activity Labor & Materials Calculation Workshop

Instructor: Emilee Weaver

Workshop Description: Students will have the opportunity to apply the activity analysis worksheet to a nature-based activity of their choosing. Students will work independently to assess the labor hours, organizational structure, and materials costs of a TH activity using a calculation worksheet that can be used to bill sites for direct services rendered (if applicable).

Learning Objectives: Upon completion of this workshop, students have an understanding of the following:

- Apply activity analysis to a plant-based TH activity
- How to calculate labor and material costs for a TH activity
- The steps required to prepare, develop, and facilitate a successful TH activity
- The importance of communicating accurate labor and materials fees to a TH client
- How to design high quality TH activities for \$5.00 or less by leveraging byproducts of nature and thinking outside of the 'activity box.'

Class 8. Herbal Harmony: Cultivating Wellness with Seven Essential Herbs and Holistic Healing Categories

Instructor: 'Cee' Stanley

Workshop Description: Join us for an enlightening journey into the world of herbal wellness in our workshop, "Herbal Harmony." In this immersive experience, we will explore the unique properties and benefits of seven powerful herbs: Tulsi, Lemon Balm, Ginger, Self-heal, Ashwagandha, Dandelion, and Yellow Dock. Additionally, we'll delve into the three crucial categories of nervines, adaptogens, and alternatives, revealing how these herbs can be harnessed to create a balanced and vibrant life. Whether you're new to herbalism or an experienced enthusiast, this workshop promises to deepen your connection with the natural world and empower you to take control of your well-being.

Learning Objectives: Upon completion of this workshop, students will better understand:

- Understand the Importance of Herbal Wellness
- Explore the World of Seven Essential Herbs
- Uncover the Power of Nervines

-
- Harness the Adaptogenic Potential
 - Embrace the Vitality of Alternatives
 - Practical Application and Preparation
 - Integrate Herbs for Balanced Living
 - Cultivate Mindful Connection with Nature
 - Continued Herbal Exploration

Class 9. Plantcestor Connections Workshop

Instructor: Deena Class

Workshop Description: This workshop will be an exploration of the power and promise of “plantcestors” in helping TH participants ground themselves in their ancestral roots. In our current world where disconnection is identified as a driver of discontent and general unwellness, this workshop will help empower practitioners to offer a way for participants to explore and deepen connections with plants that were important to their human ancestors as a way to ground themselves in their own histories. Importantly, this workshop will help move participants away from the increasingly criticized practices of “cultural mining” and “cultural appropriation” and towards a more authentic and holistic connection with our own roots. During the second half of the workshop, we will explore our own workshop participant plantcestors to demonstrate the concept and process.

Learning Objectives: Upon completion of this workshop, students will better understand:

- How to work through squeamishness to address topics of culture and heritage (often interwoven with race and ethnicity) with participants;
- Ways to potentially frame the benefits of nurturing plantcestor connections, particularly for participants who express feelings of disconnect;
- Practical considerations for working with plantcestors (e.g., space, soil, climactic challenges, cognizance of non-native and potentially invasive species introduction and potential alternatives)
- The power of exploring ethnobotanical connections with plantcestors (e.g., food, medicine, dye, fiber, construction)

Seed Propagation

Instructor: Laura Barth

Workshop Description: Students learn seed propagation techniques for native perennials and woody plants. Topics include seed collection methods, post-collection handling, cleaning equipment and techniques, seed storage, seed sowing techniques, sowing media, cultural requirements of seedlings, and dormancy requirements.

Learning Objectives: Upon completion of this workshop, students will have an understanding of the following:

- Basic seed collection methods.
- Basic seed propagation techniques.

Vegetative Plant Propagation Methods

Instructor: Emilee Weaver

Workshop Description: Students will learn the fundamentals of vegetative propagation and techniques for propagating various outdoor plants by means of stem cuttings and division. Class includes a tour of the vegetative propagation facilities of NCBG and hands-on propagation practice.

Learning Objectives: Upon completion of this workshop, students will have an understanding of the following:

- Basic vegetative stem cutting propagation techniques (annuals, perennials, shrubs)
- How to divide mature herbaceous perennials and rhizome clusters
- Characteristics of professional growing operations & propagation system

Indoor Plant Propagation & Propagating for Plant Sales

Instructor: Emilee Weaver

Workshop Description: Students will learn how to establish indoor and outdoor systems that support year-round indoor and outdoor plant propagation efforts. A variety of propagation methods will be presented, demonstrated, and reinforced with hands-on practice by students. Retail and wholesale purchasing techniques will be discussed as they pertain to program needs and plant sale profit margins. Students will learn how to produce quality plants and value-added products that contribute to the financial sustainability and reputation of a TH program.

Learning Objectives: Upon completion of this workshop, students will have an understanding of the following:

- How to choose indoor and outdoor plants that are easy and fast to propagate.
- Several indoor and outdoor plant propagation methods and the use of rooted plugs.
- How to leverage retail and wholesale purchasing relationships to enable the highest profit margins on plant/value-added products.
- How to interpret an 'availability list' and use it for year-round planning and purchasing.
- Examples of how to make plant-based, value-added products.
- How to increase the quality level of plants so they can compete with professional growers.
- How to design a plant sale to make the highest profits, educate the customers, and support the needs of the TH program participants.

Garden Design for Therapeutic Horticulture

Instructors: Kirsten Reberg-Horton & Valerie O'Brien

Workshop Description: This workshop introduces students to principles of landscape design utilized in the healing gardens that support Therapeutic Horticulture programming. Incorporating concepts of Universal/accessible design, safety, growing conditions, plant selection and aesthetics, students will learn how to approach new and existing projects from a design perspective. Students will also have the opportunity to put pencil to paper and work through a sample design challenge using the knowledge they've gained.

Learning Objectives: Upon completion of this workshop, participants will be able to:

- List the important features of a safe and accessible garden.
- Understand what makes a garden therapeutic.
- Understand how the needs of diverse populations impact landscape design.
- Use a ruler to measure out spaces in a design.
- Place different species of plants within a garden based on the plant properties and environmental conditions.
- Evaluate the design of an existing garden or roughly plan a new garden for the

purposes of therapeutic horticulture.

Fundamentals of Soil and Growing Media

Instructor: Emilee Weaver

Workshop Description: This workshop will introduce participants to the properties and uses of various types of indoor and outdoor soil and growing media. Students will touch and feel numerous samples of soil and growing media, discuss their intended uses, and learn how to differentiate and select bagged/bulk soil products for specific TH activities/projects. Outdoor, in-ground soil amendment techniques will be discussed/demonstrated that can be applied to any programming site or soil type.

Learning Objectives: Upon completion of this workshop, participants will be able to:

- Describe the properties of well-balanced soil and growing media.
- Differentiate and select appropriate bagged/bulk soil products and amendments.
- Discuss practices for maintaining and improving soil health based on existing soil conditions and TH programming needs.
- Understand the water harnessing dynamics that each soil/media type possesses.

Managing Pests, Diseases, and Weeds in the Garden

Instructor: Jane Saiers

Workshop Description: This workshop introduces students to the theory and practice of integrated pest management. Participants learn about the role of fostering healthy soil in managing garden pests. They become familiar with insect, weed, and disease life cycles; plants commonly affected by these pests; and cultural, physical, biological, and chemical methods for managing diseases, insects, and weeds in the garden. Strategies for incorporating integrated pest management into therapeutic horticulture programs are explored.

Learning Objectives: Upon completion of this workshop, participants are able to:

- Describe principles and practices of integrated disease, insect, and weed management.
- Identify common garden pests in our region.
- Outline strategies for managing common insects, diseases, and weeds that impact ornamental and vegetable crops in our region.
- Use online resources as tools in pest management efforts.

TH Program Proposal Presentations

Instructor: Emilee Weaver

Workshop Description: Proposing and delivering a compelling, well-organized, professional TH program proposal is paramount to educating and compelling host sites to welcome a TH program into their indoor and outdoor spaces. This workshop will provide the opportunity to experiment with a TH proposal template that will empower students to write effective program proposals and deliver them with confidence and poise.

Learning Objectives: Upon completion of this workshop, participants are able to:

- Identify the information that should be included in a TH program proposal.
- Effectively educate a host site about how TH services will positively impact the mission of their site and the clients they serve.
- Use their personal style and characteristics to build rapport with a host site.
- Articulate the program proposal verbally and in written form.
- Panel of TH/HT Practitioners- Q&A Session
- Names of experienced, professional TH/HT panelists TBA
- Come prepared to get any remaining questions about the TH field/practice answered by leaders in the TH/HT field!

Course Wrap Up- Ceremony & Reception

Instructor: Emilee Weaver

Workshop Description: Though our class time has come to a close, our opportunity for developing and maintaining a strong, unified therapeutic horticulture community has just begun! We'll discuss your questions about "what now??" and "where do I go from here??" A closing ceremony and reception will be held for students to connect and conclude the program as a team.

5. FACULTY

Laura Barth, NCSU Educator & Artist

Laura is an instructor for the NC Extension Gardener and Longwood Gardens Online Non-Credit Plant ID courses and NC Extension Gardener and North Carolina Botanical Garden Online Therapeutic Horticulture series. She is also an avid gardener, musician, and artist/photographer with a passion for horticulture education, communication, and research.

Deena Class, PhD

Dr. Deena Class began studying herbalism and making her own herbal skincare products at the tender age of 18 (in 1997) to help with her own lifelong eczema. After running a micro- skincare-business in the early 2000's, life took her abroad and she spent the following decade living, learning and loving in 7 different countries across 4 continents. Being a bit of a collector at heart, she kept deepening and broadening her knowledge of plants, herbalism and ethnobotanical uses of plants (medicine, dye, crafts, etc.) even as she collected degrees and experience in public health. While these adventures abroad were deeply meaningful, Deena couldn't wait to have a place to call "home" and set down roots (literally and figuratively). Relocating to the Piedmont, NC in 2014, she fell in love with the North Carolina Botanical Garden and now folds native plants into her gardening, herbalism, skin care making, crafting, and natural dyeing. She studied Therapeutic Horticulture through the NCBG/NC State Extension Gardener TH program in 2021.

Catherine Crowder, HTR

Catherine Crowder is a contract horticultural therapist working with various populations: long-term care residents, veterans, cancer patients and survivors and women's groups. She received her horticultural therapy training through HTI in 2014 and completed an internship at Hospice and Palliative Care of Greensboro. Her long-term project, planting "Hope Pots", is still used as part of the holiday grief counseling sessions at hospice. She enjoys consulting on creating therapeutic spaces and giving presentations on the benefits of being mindful in nature and the lessons learned. Prior to this career shift, Catherine worked in various marketing and corporate positions throughout the Southeast.

Amy Bruzzichesi, MSW

Amy Bruzzichesi is a therapeutic horticulturist and career social worker with a background in elder care, medical social work, and the nonprofit world. As the daughter of a landscape architect and a psychotherapist, therapeutic horticulture felt like a natural fit for her love of gardens and helping people find the tools they need to thrive. Amy works with organizations and private clients to provide therapeutic horticulture programs and services which meet the needs of people facing changes and challenges through plant- and garden- based therapeutic activities. When she isn't with clients, Amy enjoys reading, travel, and her role as an Alamance County Extension Master Gardener Volunteer. She can usually be found covered in dirt in her own garden growing fruit, flowers, and vegetables with her family.

Valerie O'Brien, Landscape Designer, BLA

Valerie O'Brien is a Landscape Designer with over five years of experience in the field. She has a Bachelor's Degree in Landscape Architecture from the SUNY College of Environmental Science and Forestry. Valerie's career has taken her on a journey from hands-on maintenance at a historic arboretum, to New York City park construction, to designing parks, greenways, and urban plazas in the Raleigh area. Her interest in healing gardens and her desire to help people connect with nature through design has led her to Horticultural Therapy. She believes that good design is the key to a great Therapeutic Horticulture program and is excited to learn and grow with the community at NCBG.

Kirsten Reberg-Horton, Owner and Designer, Kalmia Landscape Design

Kirsten Reberg-Horton has been designing and teaching landscape design to Master Gardeners and others since 2002. Kirsten believes that gardens offer an immersive sensory experience that has a unique ability to soothe our spirits and spark joy and creativity.

Kirsten is currently pursuing a Masters in Mental Health Counseling at NCCU in order to bring together mental health and our connection to nature. Empowering people to claim their birthright of the natural world, thereby enhancing their own and others wellbeing, brings her great joy and purpose. One of her favorite quotes is from *Green Nature Human Nature*, "Nature itself can entrap us involuntarily, occupy our minds, shut out daily cares, and allow us to become refreshed" (Lewis, C.A.).

www.lovepeopleloveplants.com

Jane Saiers, PhD, HTR, AAS, RambleRill Farm, Hillsborough, NC

Jane Saiers and her husband Darin Knapp grow certified organic fruits, vegetables, and mushrooms and raise goats and chickens at RambleRill Farm in Hillsborough, NC. They also offer on-farm experiences that enhance participants' health and well-being by awakening the senses and engaging the mind through connection with nature. Jane and Darin believe that nearly everyone can be healthier by spending daily time, be it 15 minutes or 8 hours, with plants and animals.

Website: www.RambleRillFarm.com | Email: Jane@RambleRillFarm.com

Beth Schultz, MS, OTR

Beth Schultz is a retired Occupational Therapist (UTMB, Galveston 1979) who believes in the therapeutic value of plants and horticulture. As a practicing therapist, she incorporated horticulture activities into her OT sessions with a variety of patient populations, volunteered with the HT program at NCBG, and mentored UNC Occupational Science students at the gardens. With colleagues, she has offered HT programs at Benevolence Farm and done HT workshops for survivors of trauma and sexual violence.

Clarenda (Cee) Stanley, Owner of Green Heffa Farms

Originally from Alabama's Black Belt, Clarenda "Farmer Cee" Stanley leads business and cultivation operations for Green Heffa Farms, a nearly 15-acre medicinal plants and herb farm in Liberty, NC. Adhering to best practices in organic and regenerative farming, Farmer

Cee honors her family's, traditional, and ancestral farming heritage. Raised on her grandparent's farm where they grew produce and raised livestock, Farmer Cee initially had no plans of following in her family's agrarian footsteps. After building an award-winning career as a nonprofit fundraising and marketing expert, she started Green Heffa Farms in 2018 to source for her herbal tea line. Green Heffa Farms' production has now expanded its traditional plant medicine and herbal offerings. Selected as the 2023 UNC Sustainability Inaugural Distinguished Entrepreneurial Venture Award recipient, Green Heffa Farms is also the country's first Black/Black woman-owned farm to attain its Certified B Corp certification. Farmer Cee is frequently asked to speak on issues such as agricultural equity, herb growing, fundraising, branding, marketing, climate resiliency for smallholder farmers, and supply chain diversification. She earned her BSBA from the University of Alabama, Huntsville and her M.Ed from Troy University and is a 2020 graduate of NC Farm School.

Amy Stidham, Instructor, Former TH Program Manager at Cape Fear Botanical Garden

Amy Stidham, HT Certified, worked as TH Program Manager at Cape Fear Botanical Garden, a non-profit public garden, from 2013-2022. She developed the Garden's initial TH program and gained first time approval for transitioning veterans at Fort Bragg to participate in horticulture classes. She earned her Certificate of Merit for coursework completion in Horticultural Therapy from Chicago Botanic Garden in 2016 and developed TH programs that provided opportunities for any age or ability to participate in activities within varied settings. Programs served those with vision and speech impairment, cognitive, behavioral and physical disabilities, veterans and military families, seniors, and those in day programs, residential assisted living and memory care facilities. She is a Veteran, NC Environmental Educator, Landscape Design Consultant and Extension Master Gardener and believes that there's always more to explore and learn about people's connection to nature and its benefits.

Greg Stivland, OTR/L, Durham Public Schools and HT Intern

Greg Stivland is a pediatric Occupational Therapist who has worked in both private and school-based practice over the last 28 years. He works with students aged 3-21 who receive services through the Exceptional Children's department, and each have an Individual Educational Plan (IEP). Populations served include children and young adults with: Developmental Disabilities, Intellectual Disability, Down syndrome, Autism, Cerebral Palsy, ADHD, Specific Learning Disabilities, TBI's, Visually Impaired/Blind, and Deaf/Hard of Hearing. Greg has used Horticulture activities with students as a therapeutic modality to support and inspire student skill development including: fine motor skills, bilateral coordination, self-regulation, attention, strength/endurance, social skills, and prevocational/vocational skills. He is currently completing coursework needed to become a Registered Horticultural Therapist including an internship through the NC Botanical Gardens in Chapel Hill.

Emilee Weaver, BSW, NCBG TH Program Manager, HT Certificate (HTI)

Emilee Weaver has been a professional horticulturist for over 25 years in five different states/climates in the U.S. Almost half of those years have been spent as a horticultural therapist and consultant. Stemming from a formalized education in social work, years of in- field horticulture experience, and a horticultural therapy certificate from the Horticultural Therapy Institute of Denver, she has developed and managed numerous HT programs involving a variety of populations and settings. Most notably, she developed a

therapeutic/vocational HT program at a high-security treatment facility for adolescent girls, a military veteran reintegration program at Denver Botanic Gardens, and managed an HT program at a 400 bed, state-managed psychiatric hospital in North Carolina. She currently serves as the Therapeutic Horticulture Program Manager at the NC Botanical Garden, providing direct services to community organizations and managing the on-site and online TH educational programs offered by the Garden. She co-authored the HT textbook, "The Profession and Practice of Horticultural Therapy" which was published in 2019.

6. ADDENDUM

6.1 MISSION AND HISTORY OF THE NORTH CAROLINA BOTANICAL GARDEN

NCBG is a unit of the University of North Carolina at Chapel Hill. We further the University's mission of teaching, research, and public service through our mission:

"To inspire understanding, appreciation, and conservation of plants in gardens and natural areas and to advance a sustainable relationship between people and nature."

The concept of the conservation garden was developed at NCBG in the early 1990s to represent the many conservation-related activities that the NCBG is pursuing. The Garden has the following eight program themes within its mission.

1. Conservation through propagation of native plants, which ensures that wild populations are not damaged by direct use.
2. Seed banking and reintroduction, an ex-situ conservation program that protects germplasm reserves as a last resort against extinction in the wild and for use in reintroduction of wild populations.
3. The protection and restoration of natural areas.
4. The elimination of invasive species and replacement with noninvasive alternatives.
5. Gardening in nature's context, which seeks to promote plants that support native biodiversity.
6. Sustainable gardening, which seeks to promote environmentally friendly gardening practices.
7. Supplying critical information on conservation of the flora of the southeastern United States and on the Garden's conservation programs.
8. People-nature relations, which describes how important plant diversity and natural areas are to the physical and psychological health of all of us.
9. The history of NCBG is a history of the people and the botanical legacy of the University of North Carolina at Chapel Hill.

Please review more details about the North Carolina Botanical Garden history on our website at <https://ncbg.unc.edu/about/a-conservation-garden/>