

**Executive Summary Report to the  
American Horticultural Therapy Association  
On the  
2022 Job Task Analysis**



**American  
Horticultural Therapy  
Association®**

ADVANCING THE PRACTICE OF HORTICULTURE AS THERAPY

Presented to:  
**American Horticultural Therapy Association  
(AHTA)**

**2022**

By Professional Testing Corporation



---

## EXECUTIVE SUMMARY

---

### Survey Background, Purpose, and Methodology

---

A Job Task Analysis (JTA) study was undertaken by the American Horticultural Therapy Association (AHTA) with the assistance of the Professional Testing Corporation (PTC). A representative panel of practitioners selected by AHTA served as the Task Force who delineated the tasks and knowledge areas involved in the profession of horticultural therapy and therapeutic horticulture. A group of Independent Reviewers assessed their work and provided feedback. A survey instrument was designed to validate the domains, tasks, and knowledge areas. Demographic questions were included in the survey to determine the backgrounds of the survey respondents. Members of the Task Force also completed a matrix linking the domains with the knowledge areas drawn upon to perform tasks in each domain.

The survey was prepared and sent electronically to more than 650 horticultural therapists. Respondents were asked to evaluate the frequency and importance of task statements, the importance of knowledge areas, and the importance of and percentage of time devoted to tasks in each domain. The respondents also were asked to review the proposed eligibility and recertification criteria and determine whether or not the requirements were appropriate.

The results have been used in the establishment of content specifications for the new Horticultural Therapist – Board Certified (HT-BC) certification examination. The Task Force reviewed the data resulting from the survey as the basis for their recommendations to the Steering Committee concerning the eligibility and recertification requirements and the test specifications. The Steering Committee discussed and agreed with those recommendations. This process contributes to the validity of the examination and the quality of the examination program for the HT-BC credential.

### The Job Task Analysis Study

---

In the fall of 2021, AHTA established a Steering Committee for the AHTA Job Task Analysis (JTA). All members of the Steering Committee were horticultural therapists who have been active in AHTA volunteer activities and represented a variety of areas of expertise, levels of experience, and geographic locations.

In November 2021, the Steering Committee appointed a Task Force to delineate the tasks and knowledge areas involved in the profession of horticultural therapy, as well as the demographic questions to be used on a validation survey instrument. The Steering Committee, acting in an advisory capacity, provided general guidance to PTC and the Task Force. The Task Force appointed by the Steering Committee was composed of horticultural therapists in a variety of practice settings.

#### *Delineation of Domains, Tasks, and Knowledge Areas*

The Task Force began by reviewing materials assembled by PTC staff based on a previous job task analysis conducted by AHTA for the Horticultural Therapist-Registered (HTR) program and articles related to horticultural therapy/therapeutic horticulture. Members of the Task Force provided feedback, discussed, and came to a consensus on preliminary delineations of tasks, knowledge areas, and demographic questions.

The Task Force also set the scales for the survey. The frequency scale for the task statements was set at (4) Daily, (3) Weekly, (2) Monthly, and (1) Quarterly or less. The importance scale, used for the domains, task statements and knowledge areas, was set at (4) Very Important, (3) Important, (2) Somewhat Important,

and (1) Minimally/Not Important. Domains also were rated for percentage of time spent in a domain on an annual basis.

A panel of independent reviewers provided feedback on the comprehensiveness, clarity, consistency, and relevance of the proposed domains, tasks, knowledge areas, and demographic questions. The Task Force took into consideration the comments from the Independent Reviewers and came to a consensus on which changes would be incorporated into the final text of the survey.

The Task Force agreed upon 66 task statements (organized into 6 domains), 56 knowledge areas, and 18 demographic questions that were included in the validation survey. Task Force members also used a matrix of domains and knowledge areas to indicate which domains draw upon which knowledge areas.

### Validation Survey

To confirm the appropriateness of the domains, tasks, and knowledge areas developed by the Task Force, a validation survey was devised, also incorporating demographic questions to help create a profile of the survey respondents.

On May 2, 2022, the survey link, along with the cover letter, was e-mailed to a list of over 650 horticultural therapists. To encourage participation in the study, AHTA also sent announcements and posted video messages about the survey on several social media platforms, such as Facebook, Instagram, and Twitter. On May 23, 2022, the survey was closed. Of the 491 individuals who opened the email, 108 (22%) provided responses to the survey. Of those who responded, 99 individuals (91.7%) completed 90% or more of the survey.

## **Eligibility and Recertification Requirements**

---

In addition to providing demographic information about themselves, the survey respondents were asked to review the proposed eligibility requirements for taking the HT-BC certification examination and the recertification requirements for maintaining the credential. The eligibility requirements were similar to those currently used for the HTR professional registration program. Although 68% of respondents indicated that the proposed eligibility requirements are appropriate, many provided comments that reflected the perceived difficulty in finding supervised internships and academic programs, especially in some geographic areas. The Task Force and Steering Committee recommended that the AHTA Board reconsider certain aspects of the proposed eligibility requirements.

AHTA has determined that the certification will be valid for five years. The proposed recertification requirements included either retaking the certification examination in effect at that time or completing 50 units of continuing education (CEs) in the five years. Although 76% of respondents indicated that the recertification requirements are appropriate, many provided comments reflecting the perceived difficulty in attaining CEs through college coursework. The Task Force and Steering Committee expressed awareness that a wide variety of activities are being considered as potential ways to earn CEs other than academic coursework.

## Development of Test Specifications

---

The responses of the participants who completed the survey were tabulated and cross tabulations of the data according to several of the demographic variables were run. The results suggested that the respondents were representative of the field of horticultural therapy/therapeutic horticulture.

The Task Force reviewed and discussed the data results, including the highest and lowest ratings, for the task statements, knowledge areas, and domains, as well as several cross tabulations of the data. The Task Force decided to base the test specifications on the overall ratings per domain, as shown below:

Domain	Time spent in domain * domain importance	Weighting (%)	Number of Associated Tasks
01: Horticulture	122.0	34.2%	24
02: Treatment Plan	61.9	17.3%	9
03: Program Planning and Activity Design	99.5	27.8%	16
04: Managing Human Resources	17.9	5.0%	6
05: Business Practice, Safety, and Ethics	29.8	8.3%	5
06: Professionalism and Scholarship	26.1	7.3%	6

The Task Force also recommended that the HT-BC certification examination consist of 150 scored multiple-choice items.

The Steering Committee agreed with the Task Force recommendations concerning the domain weightings and the number of items to have on the exam. The resulting test specifications are shown below:

### Test Specifications for HT-BC Certification Examination

Domain	Weighting (%)	Number of Items
01: Horticulture	34.2%	51
02: Treatment Plan	17.3%	26
03: Program Planning and Activity Design	27.8%	42
04: Managing Human Resources	5.0%	8
05: Business Practice, Safety, and Ethics	8.3%	12
06: Professionalism and Scholarship	7.3%	11

---

## DETAILED CONTENT OUTLINE

---

### Horticultural Therapist – Board Certified (HT-BC) Certification Examination Test Specifications and Content Outline

---

01. **Horticulture** (34.2%; 51 items covering 23 tasks)
- A. Plant Propagation and Maintenance
    - 01. Select appropriate plant materials
    - 02. Set planting/plant maintenance schedules
    - 03. Identify possible sources for seeds/plants and other materials for program
    - 04. Propagate plants and seeds/stem cuttings/root cuttings
    - 05. Maintain plants throughout their life cycles
    - 06. Prepare and apply soil amendments
    - 07. Prepare and apply plant nutrients
    - 08. Develop and implement watering schedules
    - 09. Identify, prevent, and manage plant diseases
    - 10. Identify and manage common weeds
    - 11. Develop and implement an integrated pest management plan
    - 12. Transplant plants
    - 13. Prune/trim/train plants
    - 14. Harvest food, plant material, or flowers
    - 15. Plan for proper disposition of harvest
  - B. Indoor/Outdoor Plant Environments
    - 01. Manage greenhouse/nursery/outdoor gardens
    - 02. Create and maintain indoor plant environments
    - 03. Design gardens and landscapes in keeping with therapeutic horticultural design concepts
    - 04. Coordinate maintenance of non-plant-related landscape features, hardscapes, and program sites
    - 05. Use tools (such as shovels, rakes, spading forks, trowels, small pruners, etc.) demonstrating appropriate and safe use
    - 06. Maintain/repair tools and equipment
    - 07. Maintain equipment and supply inventory
    - 08. Maintain a compost system/properly dispose of yard, garden, and greenhouse waste

Tasks in this domain are supported by the following Knowledge Areas:

Plant Sciences: K1, K2, K3, K4, K5, K6, K7, K8, K9

Human Sciences:

Horticultural Therapy/Therapeutic Horticulture: K25, K26, K29, K30, K31, K38, K40

Professionalism and Scholarship: K47

**02. Treatment Plan** (17.3%; 26 items covering 9 tasks)

- A. Review charts/documentation of participant
- B. Participate in treatment team meetings with practitioners of other modalities
- C. Develop and co-facilitate collaborative services with other treatment providers
- D. Conduct and document assessment
- E. Develop and document individualized intervention plan
- F. Review intervention plan with participant
- G. Identify and write measurable goals and objectives
- H. Monitor goals and objectives of individual intervention plan and document participant's progress
- I. Revise/update individualized plan

Tasks in this domain are supported by the following Knowledge Areas:

Plant Sciences:

Human Sciences: K10, K11, K12, K13, K14, K15, K16, K17, K18, K19, K20, K21

Horticultural Therapy/Therapeutic Horticulture: K22, K23, K24, K26, K27, K31, K32, K33, K34, K35, K38, K40, K41

Professionalism and Scholarship: K47, K49, K56

**03. Program Planning and Activity Design** (27.8%; 42 items covering 15 tasks)

- A. Program Development
  - 01. Develop and schedule the ongoing program, session plans, and/or lesson plans
  - 02. Integrate therapeutic, academic, vocational curricula
  - 03. Implement individual, group sessions/programs
- B. Program Evaluation
  - 01. Evaluate program effectiveness for participants and facility
  - 02. Identify strategies for program improvement
  - 03. Generate periodic program reports
  - 04. Incorporate implementation best practices
- C. Activities
  - 01. Utilize activity analysis and task analysis
  - 02. Understand presenting issues, strengths, needs, and safety requirements of participants
  - 03. Match tasks to participant needs (considering task analysis, material preparation, safety concerns, etc.)
  - 04. Adapt and/or modify (grade) activities and/or instructions
  - 05. Adapt tools and equipment
  - 06. Perform task analysis on horticultural and gardening activities/exercises
  - 07. Create a "toolbox" or manual of activities for months/ seasons
  - 08. Identify new activities appropriate for population or individual

Tasks in this domain are supported by the following Knowledge Areas:

Plant Sciences: K1, K2, K3, K4, K5, K7, K8, K9

Human Sciences: K10, K11, K12, K13, K14, K15, K16, K17, K18, K19, K20, K21

Horticultural Therapy/Therapeutic Horticulture: K24, K25, K26, K27, K28, K29, K30, K31, K32, K33, K34, K36, K38, K39, K40, K41

Professionalism and Scholarship: K42, K47, K49, K54

**04 Managing Human Resources** (5.0%; 8 items covering 5 tasks)

- A. Conduct on-the-job training for other HT staff
- B. Recruit, train, educate, supervise, and/or evaluate volunteers and students
- C. Develop, implement, and/or maintain horticultural therapy internship program
- D. Recruit, train, educate, supervise, and/or evaluate interns
- E. Educate non-HT team members on horticultural therapy techniques and interventions

Tasks in this domain are supported by the following Knowledge Areas:

Plant Sciences:

Human Sciences:

Horticultural Therapy/Therapeutic Horticulture: K39

Professionalism and Scholarship: K45, K46, K48, K49, K50, K52, K54, K55, K56

**05. Business Practice, Safety, and Ethics** (8.3%; 12 items covering 5 tasks)

- A. Develop, monitor, and maintain safety plan
- B. Document occurrences relating to health and safety
- C. Prepare, implement, evaluate, and/or monitor budget
- D. Promote the agency, horticultural therapy services, and the profession through marketing and public relations
- E. Follow HIPAA regulations and other rules and regulations of location, employer, etc.

Tasks in this domain are supported by the following Knowledge Areas:

Plant Sciences: K7, K9

Human Sciences: K10, K11, K12, K13, K14, K15, K16, K17, K18, K19

Horticultural Therapy/Therapeutic Horticulture: K29, K30, K31, K32, K33, K34, K35, K36, K38, K39, K40, K41

Professionalism and Scholarship: K42, K43, K44, K45, K46, K47, K48, K49, K50, K51, K52, K53, K54, K55, K56

**06. Professionalism and Scholarship** (7.3%; 11 items covering 5 tasks)

- A. Support research programs or special projects
- B. Establish and maintain network with organizations and advocates
- C. Provide education to the community
- D. Develop proposals for funding and grants
- E. Participate in professional events (e.g., conferences, job fairs, etc.)

Tasks in this domain are supported by the following Knowledge Areas:

Plant Sciences:

Human Sciences:

Horticultural Therapy/Therapeutic Horticulture: K34, K35, K36, K37, K39, K40

Professionalism and Scholarship: K43, K44, K45, K46, K48, K49, K51, K52, K53, K54, K55, K56

## Knowledge Areas

### Plant Sciences

- K1. Botany (such as knowledge of plant classification; growing requirements; plant biology, physiology, and structure, etc.)
- K2. General horticulture (such as soils, organic/inorganic approaches, raised bed gardening, selection of appropriate plant materials, pruning, plant maintenance, etc.)
- K3. Greenhouse and nursery production/management (such as plant propagation, watering systems, etc.)
- K4. General plant identification (such as tropical and interior plants, trees, shrubs, perennials, annual plants, etc.)
- K5. Toxicity of plant materials
- K6. Pest (insect)/disease/weed identification and management (such as basic plant pathology, application of appropriate pest control, etc.)
- K7. Knowledge of environmental concerns in horticulture (such as local native plants, invasive species, etc.)
- K8. Knowledge of climate/microclimate impacts on plants (such as temperature, humidity, sun exposure, etc.)
- K9. Landscape design, construction, and maintenance

### Human Sciences

- K10. Anatomy and Physiology
- K11. Physical diseases and impairments (such as spinal injury, cerebral palsy, cancer, stroke, etc.)
- K12. Psychological impairments (such as mental illness, substance use, etc.)
- K13. Sensory impairments (such as vision, hearing, sensory processing disorders, etc.)
- K14. Cognitive impairments (such as dementia, Down syndrome, etc.)
- K15. Neurodiversity (such as autism spectrum disorder, attention deficit, etc.)
- K16. Principles of counseling theories and techniques, behavioral interventions, motivational strategies
- K17. Principles of group dynamics, group facilitation, motivation, and leadership
- K18. Medications and side effects
- K19. Pharmacology for specific populations
- K20. Human growth and development across the lifespan
- K21. Physical and mental health and wellness

### Horticultural Therapy/Therapeutic Horticulture

- K22. Assessment selection/development based on individual needs and setting
- K23. Client assessment (evidence-based needs assessment, best practices, promising practices for interventions), evaluation, and documentation
- K24. Appropriate goals and objectives for horticultural therapy/therapeutic horticulture participants
- K25. Plant materials for horticultural therapy/therapeutic horticulture programs
- K26. Horticulture activities and activity modification
- K27. Activity/task analysis
- K28. Adaptation of activities and interventions
- K29. Accessible indoor/outdoor horticultural therapy/therapeutic horticulture areas (including consultation, site assessment, installation, utilization, evaluation, etc.)
- K30. Therapeutic garden characteristics and universal design
- K31. Program design relative to population served
- K32. Other disciplinary approaches (such as occupational, physical, art, recreation, etc.)
- K33. Documentation policy and procedures (such as assessment, progress, outcomes, discharge, etc.)
- K34. Interdisciplinary care team planning



- K35. Effectiveness of program outcomes and best practices
- K36. Published research and literature on horticultural therapy/therapeutic horticulture
- K37. Horticultural therapy/therapeutic horticulture research methods, evaluation, and outcomes
- K38. Design for accessible/adaptable structures, tools, devices, and equipment
- K39. Program management
- K40. Human issues in horticultural therapy/therapeutic horticulture (such as people-plant relationships, etc.)
- K41. Assessment protocols and care planning

**Professionalism and Scholarship**

- K42. Budgeting and fiscal responsibility
- K43. Code of Ethics
- K44. HIPAA and other federal/state/local/regulatory agency regulations
- K45. Program promotion, resources, and management
- K46. Funding resources, grants, and proposals
- K47. Safety
- K48. Professionalism
- K49. Collaboration with allied professionals (such as in multi-disciplinary teams)
- K50. Volunteer coordination and internship supervision
- K51. Self-care
- K52. Networking
- K53. Marketing
- K54. Effective communication with diverse populations and constituencies
- K55. Identifying funding sources and applying for grants
- K56. Engagement and leadership with multi-disciplinary teams