BTC Catalog Addendum – 7.25.25

HORTICULTURE TECHNOLOGY – DIPLOMA PROGRAM

Program Length Day	7 Months/28 Weeks
Total Clock Hours	756

Educational Objective

There is an increasing demand for trained individuals in the horticulture and related plant science fields leading to a wide range of career opportunities. Students will establish a strong background in the plant sciences while making connections to critical environmental issues. The science-based core instruction focuses on traditional, and practical skills development, and integrates advancing technology, sustainability, and current industry best practices. Curriculum coincides with today's job market demands considering our regional economy, and a significant applied learning component is integrated throughout the coursework. Opportunities exist in areas of ornamental horticulture, agriculture, arboriculture, and floriculture, among others, including but not limited to positions in greenhouse production and operations, interior plantscaping, farming, environmental technology, nursery management, turf management, conservation, landscaping, and wholesale/retail floral. Upon successful completion, and given the scope of training, students may consider pursuing additional cross industry certifications based on their individual career goals. If you are a hard-working, energetic, and curious person, this program is worth investigating. Applicants should be committed to possessing a strong work ethic, be flexible, have good people skills, and be physically able to work in a wide range of situations.

Course Length	756 clock hours
Externship Included	Yes
Class Schedule	Monday through Thursday, 8:00 a.m.— 3:00 p.m., Friday 8:00 a.m.—12:00 p.m. unless noted otherwise Externship schedules are determined by the site.

Course Outline

Course Numbers	Courses	Hours
HT 101	Botany I	32
HT 111	Botany II	24
HT 102	Design I	24
HT 112	Design II	32
HT 122	Design III	32
HT 103	Plant Propagation I	32
HT 113	Plant Propagation II	24
HT 104	Installation and Maintenance I	32
HT 114	Installation and Maintenance II	16
HT 124	Installation and Maintenance III	32
HT 105	Integrated Pest Management I	24
HT 115	Integrated Pest Management II	32
HT 106	Plant Industry Operations I	44
HT 116	Plant Industry Operations II	44
HT 126	Plant Industry Operations III	52
HT 107	Taxonomy I	32

HT 117	Taxonomy II	32
HT 108	Greenhouse Production	32
HT 109	Business Basics for Horticulture	16
PD 101	Professional Development I	16
PD 102	Professional Development II	16
PD 103	Professional Development III	16
HX 100	Externship	120
	Total Clock Hours	756

HORTICULTURE TECHNOLOGY DIPLOMA PROGRAM COURSE DESCRIPTIONS

HT 101 Botany I
This course explores plant structure and its influence on cultivation. Through classroom instruction and laboratory experiences, students will examine the anatomy and function of roots, stems, leaves, and flowers, alongside exploring plant life cycles and reproductive processes. The relationship between plants and people will also be investigated, providing context for advanced studies in botany and horticulture.

HT 111 Botany II
This course examines plant growth and development, emphasizing the impact of external factors. You'll investigate crucial plant processes such as photosynthesis, respiration, and transpiration. The course will delve into how environmental and ecological factors, including soil and water properties, pH, nutrients, light, and temperature, influence plant growth and development.

HT 102 Design I
Primary focus on the elements, principles, and applications of design. Understand the principles and supporting elements of design; work both manually and with computers to develop skills and express ideas through a variety of art media; studies may include, but are not limited to photography, floral, landscape and graphic design.

HT 112 Design II
Primary focus on the design environment. Integrate design skills and environmentally sound solutions to practical problems in the design environment; applied learning projects in a variety of plant science studies, including horticulture, floriculture, landscaping, plantscaping, urban planning, and marketing; practice hand drawing designs; explore landscape design case studies; work on design projects on campus and in the community as part of service learning and service projects as applicable.

HT 122 Design III
Primary focus on the elements, principles, and applications of floral design; elements of container design; learn computer assisted design (CAD) software to develop skills and express ideas; learn how to construct an effective portfolio of work.

HT 103 Plant Propagation I
Primary focus on the general aspects of plant propagation by seed and cuttings. Explore the history and biology of plant propagation; understand the various stages in the life cycle of plants; investigate environmental requirements for proper plant propagation including light, temperature, moisture, and soils; demonstrate knowledge of seed production and subsequent propagation techniques; compare principles and techniques of sexual and clonal propagation; propagate plants from seeds and vegetative cuttings.

HT 113 Plant Production II
Propagation II continues from where Propagation I left off. Focusing on the vegetative propagation of plants as well as micropropagation. In theory and utilizing modules of applied learning, demonstrate knowledge of asexual propagation techniques including separation, division, grafting, budding and layering; students are introduced to bio-technical methodology; explore mitosis, totipotency and micropropagation; develop propagation and production schedules. Produce crops as needed or assigned.

HT 104 Installation and Maintenance I

Installation & Maintenance is an integrative experience that spans all three trimesters of the Horticulture Technology program (HT 104, HT 114, and HT 124). This course series focuses on the daily skills and knowledge required in the installation and maintenance of plants in a variety of environments with an emphasis on safety. Understand and practice general safety in the field, classroom, lab, and the greenhouse; gain insight into accident prevention and the safe and efficient handling of tools and materials; explore proper use of tools and systems in the greenhouse and landscape; learn and practice proper techniques for planting and maintaining plants in various environments.

HT 114 Installation and Maintenance II
Installation & Maintenance is an integrative experience that spans all three trimesters of the Horticulture Technology program (HT 104, HT 114, and HT 124). This course series focuses on the daily skills and knowledge required in the installation and maintenance of plants in a variety of environments with an emphasis on safety. Understand and practice general safety in the field, classroom, lab, and the greenhouse; gain insight into accident prevention and the safe and efficient handling of tools and materials; explore proper use of tools and systems in the greenhouse and landscape; learn and practice proper techniques for planting and maintaining plants in various environments.

HT 124 Installation and Maintenance III
Installation & Maintenance is an integrative experience that spans all three trimesters of the Horticulture Technology program (HT 104, HT 114, and HT 124). This course series focuses on the daily skills and knowledge required in the installation and maintenance of plants in a variety of environments with an emphasis on safety. Understand and practice general safety in the field, classroom, lab, and the greenhouse; gain insight into accident prevention and the safe and efficient handling of tools and materials; explore proper use of tools and systems in the greenhouse and landscape; learn and practice proper techniques for planting and maintaining plants in various environments.

HT 105 Integrated Pest Management I
Primary focus on pest identification and IPM. Identify common pests affecting horticulture; study orders of insects and related arthropods and their relationships with plants and characteristics used in identification across their life cycle; understand fungal, bacterial and viral infections of plants and their signs and symptoms; study common vertebrate pests and their damage; understand pesticide safety and relevant state and federal laws; begin studies to earn state pesticide applicator license.

HT 115 Integrated Pest Management II
Apply principles of integrated pest management to theoretical and real situations, recognizing the influence of thresholds, biological considerations and preventative measures for successful pest management; understand the safe and effective use of pesticides and demonstrate ability to select, mix, load, and apply them as required by law; gain familiarity with pesticide application and safety equipment; take the core examination to become certified as a commercial pesticide applicator in the State of Pennsylvania; explore independent study and testing in specific categories that may be required in intended career field.

HT 106 Plant Industry Operations I
Plant Industry Operations is an integrative experience that spans all three trimesters of the Horticulture Technology program (HT 106, HT 116, and HT 126). The goal of this course is to expose students to as many sectors of the horticulture industry as possible to help inform career decisions. Students will engage in a dynamic learning experience through guest speakers from the horticulture industry, off-site field visits and activities, hands-on practice, and lecture. The curriculum spans a wide range of topics in the industry which are covered in no pre-specified order due to the seasonality and variability of the horticulture industry. Students will actively construct viable career paths based on information discussed in class; observations made during field activities, site visits, and interactions with industry experts; and independent research. Networking with industry experts in this course is a critical durable skill with which students must engage in this course.

HT 116 Plant Industry Operations II
Plant Industry Operations is an integrative experience that spans all three trimesters of the Horticulture Technology program (HT 106, HT 116, and HT 126). The goal of this course is to expose students to as many sectors of the horticulture industry as possible to help inform career decisions. Students will engage in a dynamic learning experience through guest speakers from the horticulture industry, off-site field visits and activities, hands-on practice, and lecture. The curriculum spans a wide range of topics in the industry which are covered in no pre-specified order due to the seasonality and variability of the horticulture industry. Students will actively construct viable career paths based on information discussed in class; observations made during field activities, site visits, and interactions with industry experts; and independent research. Networking with industry experts in this course is a critical durable skill with which students must engage in this course.

HT 126 Plant Industry Operations III
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HT 107 Taxonomy I
Taxonomy (HT107 & HT117) is a foundational, two-trimester course series within the Horticulture Technology program. This course emphasizes field-based plant identification, focusing on observable characteristics, cultural requirements, and practical applications. Students will gain proficiency in using dichotomous keys, botanical manuals, and field guides. Key areas of study include observing and identifying morphological features of leaves, stems, buds, flowers, and fruits, alongside mastering the associated descriptive terminology. The curriculum also delves into the hierarchical classification system, exploring how plants are grouped based on their characteristics and evolutionary relationships, while learning both scientific and common names. Practical skills developed include taking detailed field notes, collecting plant specimens for taxonomic identification, and learning proper methods of pressing and drying for preservation. The knowledge gained on plant families and relationships will be integrated and applied to other horticulture course studies.

HT 117 Taxonomy II
Taxonomy (HT107 & HT117) is a foundational, two-trimester course series within the Horticulture Technology program. This course emphasizes field-based plant identification, focusing on observable characteristics, cultural requirements, and practical applications. Students will gain proficiency in using dichotomous keys, botanical manuals, and field guides. Key areas of study include observing and identifying morphological features of leaves, stems, buds, flowers, and fruits, alongside mastering the associated descriptive terminology. The curriculum also delves into the hierarchical classification system, exploring how plants are grouped based on their characteristics and evolutionary relationships, while learning both scientific and common names. Practical skills developed include taking detailed field notes, collecting plant specimens for taxonomic identification, and learning proper methods of pressing and drying for preservation. The knowledge gained on plant families and relationships will be integrated and applied to other horticulture course studies.

HT 108 Greenhouse Production
Primary focus on greenhouse systems, infrastructure, and production methods. Investigate the design, function and outcomes of proper greenhouse management; explore and practice a variety of production techniques, explore types of growing structures and facilities; analyze systems including infrastructure, environment and cropping technology and record keeping. Differentiate between growing media, demonstrate knowledge of the properties of soil; understand essential elements and fertilizer formulations; establish light, moisture, gas and plant growth regulator requirements. Grow, maintain, and market crops as required.

HT 109 Business Basics for Horticulture
This course introduces basic competencies needed in starting and/or managing a horticulture business operation. Emphasis is placed on types of business ownership, accounting, finance, inventory management, schedules, marketing strategies, sales and customer service, and human resources. Students will also be given an elementary synopsis of some computer-based systems they might encounter in the industry, including accounting software, enterprise resource planning (ERP) systems and customer relationship management (CRM) systems.

PD 101 Professional Development I
Strategies for success while attending school; discover personal working likes and dislikes; effective workplace communication, etiquette, and attire; teamwork; and self-management.

PD 102 Professional Development II
Primary focus on resume building and creating other related professional documents. Build and refine employment documents, including resumes, job applications, cover letters, follow-up letters and reference lists.

PD 103 Professional Development III

Primary focus on interview skills. Build on existing skills to improve ability to communicate professionally; learn successful verbal and nonverbal communication techniques for interviewing, practice multiple types of interviews common for the industry.

HX 100 Externship
The final segment of training is a four-week externship which provides the student with on-the-job experience under the supervision of a professional in the field. Students are exposed to procedures and techniques, safety concepts and practices as well as to the professional environment.

ESTIMATE OF COST OF ENROLLMENT

Horticulture Technology
7 MONTHS/880 CLOCK HOURS

BIDWELL TRAINING CENTER MANDATORY FEES			
APPLICATION FEE	$ - 0 -		
LAB FEE	$ - 0 -		
CERTIFICATION TEST FEE	$ 70		
CLEARANCE FEES	$ 22		
GRADUATION FEE	$ 50		
PRACTICUM INSURANCE FEE	$ - 0 -		
SUB-TOTAL MANDATORY FEES		$ 142	
BIDWELL TRAINING CENTER TUITION		$ 12,000	
BIDWELL TRAINING CENTER SUPPLIES			
COMPUTER	$ -0-		
BOOKS	$ 1,251		
STUDENT SUPPLIES	$ 205		
UNIFORM	$ 34		
SUB-TOTAL MANDATORY SUPPLIES:		$ 1,805	
BIDWELL TRAINING PROGRAM TOTAL:			$ 13,947
INTERNAL ONE-TIME INSTITUTIONAL GRANT AWARD		$ <13,947>	
Cost of Bidwell Enrollment to Student:		$ - 0 -	