Horticultural Technology (HT)

# Course numbers with the # symbol included (e.g. #400) have not been taught in the last 3 years.

**HT #404 - Plant Propagation**
**Credits:** 0-4
Reproduction of plants for horticultural purposes by sexual and asexual methods. Seeds, cuttings, separation, division, layering, grafting, budding, and in vitro propagation. Special fee. Prereq: HORT 207 or permission. 2 lec/1 lab.
**Equivalent(s):** HT 204
**Grade Mode:** Letter Grading

**HT 407 - Plant Structure and Function**
**Credits:** 4
Morphology, anatomy, and physiology, with emphasis on the higher plants. Horticultural implications. Lab stresses observations and manipulations of the particulars of plant life. Special fee. 2 rec/1 lab.
**Equivalent(s):** HT 207
**Grade Mode:** Letter Grading

**HT 415 - Soils and Land Use**
**Credits:** 2
Introduction to soils with emphasis on physical, morphological, chemical, and biological characteristics and their applications in horticultural land use decisions. Includes soil genesis and classification and soil survey use. Special fee. 3 rec/1 lab/7 wks.
**Equivalent(s):** HT 215
**Grade Mode:** Letter Grading

**HT 416 - Soils and Plant Nutrition**
**Credits:** 0-2
Role of nutrition in plant health care. Macro- and micro-nutrient needs, nutrition deficiency symptoms, soil testing, and fertilizer application techniques in both soil and soil-less media. Special fee. 3 rec/1 lab/7 wks.
**Equivalent(s):** HT 217, HT 417
**Grade Mode:** Letter Grading

**HT #427 - Greenhouse Operation and Design**
**Credits:** 0 or 2
Designing, using, equipping and managing greenhouses for production and retail with a focus on structure and environment and how these pertain to plant production. Includes lab in our production greenhouse. Special fee.
**Equivalent(s):** HT 227, HT 227A
**Grade Mode:** Letter Grading

**HT #428 - Plant Production Techniques**
**Credits:** 2
Managing greenhouse infrastructure and crops for production and retail. This class will focus on irrigation, plant nutrition, pest and disease control and lighting. Labs and experience in our production greenhouse range supplement lectures in this hands-on course.
**Equivalent(s):** HT 227, HT 227B
**Grade Mode:** Letter Grading

**HT 450 - Flower Show Design and Construction**
**Credits:** 1
Design, construction, and maintenance of the Thompson School horticultural exhibit at a public flower show. May be repeated. Special fee. 1 rec.
**Equivalent(s):** HT 250
**Grade Mode:** Letter Grading

**HT #454 - Irrigation Design**
**Credits:** 0 or 3
Design, installation, and operation of irrigation systems in the greenhouse, nursery, field crops, and landscape. Special fee. 1 lec/1 lab.
**Equivalent(s):** HT 254
**Grade Mode:** Letter Grading

**HT #460 - Sustainable Plant Management**
**Credits:** 4
Sustainable practices and principles in selecting, establishing and maintaining woody and herbaceous plants for optimum health. Topics include planting, pruning, fertilization, pest identification, plant culture and communities.
**Grade Mode:** Letter Grading

**HT #493 - Field Operations**
**Credits:** 1-3
Seven-week or fourteen-week modules of field experience in selected areas of horticulture under the supervision of an appropriate member of the faculty/staff. A student may enroll in two modules per term. A) Floriculture; B) Floral Design; C) Nursery and Garden; D) Landscape; E) Horticultural Therapy. Special fee. Prereq: permission of instructor and student’s adviser.
**Equivalent(s):** HT 293
**Grade Mode:** Letter Grading

**HT 494 - Field Operations**
**Credits:** 1-3
Seven-week or fourteen-week modules of field experience in selected areas of horticulture under the supervision of an appropriate member of the faculty/staff. A student may enroll in two modules per term. A) Floriculture; B) Floral Design; C) Nursery and Garden; D) Landscape; E) Horticultural Therapy. Special fee. Prereq: permission of instructor and student’s adviser.
**Equivalent(s):** HT 294
**Grade Mode:** Letter Grading

**HT 529 - Horticultural Facilities Mgmt**
**Credits:** 0 or 2
Layout, systems, construction, management principles, and horticultural techniques used in controlled growth structures, including greenhouses, propagation houses and beds, cold frames, hoop houses, and lath houses. Includes practicum in daily operation of Thompson School horticultural facilities, with second-year focus on scheduling and supervision. 2 lab.
**Equivalent(s):** HT 227, HT 227C
**Grade Mode:** Letter Grading
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
<th>Grade Mode</th>
<th>Equivalent(s)</th>
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<tbody>
<tr>
<td>HT 530</td>
<td>Horticultural Facilities Mgmt</td>
<td>0 or 2</td>
<td>Layout, systems, construction, management principles, and horticultural techniques used in controlled growth structures, including greenhouses, propagation houses and beds, cold frames, hoop houses, and lath houses. Includes practicum in daily operation of Thompson School horticultural facilities, with second-year focus on scheduling and supervision. 2 lab.</td>
<td>Letter Grading</td>
<td>HT 227, HT 227D</td>
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<tr>
<td>HT #551</td>
<td>Introduction to Design Communication</td>
<td>2</td>
<td>Introduction to methods of communicating garden and landscape design. Lab work covers selected 2-D and 3-D tools and techniques, including instrumental drawing, modeling, and computer-aided drafting and design (CADD). Special fee. Prereq: TSAS 205, Computers in the Workplace. 1 lec/1 lab.</td>
<td>Letter Grading</td>
<td>FORT 251</td>
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<td>HT 553</td>
<td>&quot;Pond-less&quot; Water Feature Design and Installation</td>
<td>2</td>
<td>A major trend in landscape design is the use of water features that range from simple recirculating pond to major waterfalls and fountains. Class starts with the design principles of &quot;pond-less&quot; features and expands to proper installation techniques. Determining water flow, recirculation rates, appropriate pump requirements and filter techniques are critical to a fully functioning feature. Explore differences between &quot;pond-less&quot; and eco-system ponds. Class culminates in the design and installation of a complete system.</td>
<td>Letter Grading</td>
<td>HT 253</td>
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<td>HT 554</td>
<td>Sustainable Irrigation and Rain Harvesting</td>
<td>3</td>
<td>As identifying water resources becomes ever more critical, students learn how to efficiently irrigate the landscape using low volume irrigation with harvested rainwater as the water source. Course focuses on proper design concepts of low volume irrigation as well as the design of rainwater storage systems. Includes developing site plans, identifying soil types and determining plant material to be irrigated. Learn about flow rates, water pressure and the technical components required for a complete system.</td>
<td>Letter Grading</td>
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<td>HT 555</td>
<td>Landscape Lighting Design and Installation</td>
<td>2</td>
<td>Creating outdoor &quot;rooms&quot; is a hot trend in landscaping. Class starts with design elements that are functional, aesthetically pleasing while minimizing light pollution and electrical usage. Learn various lighting options from LED to other low-voltage systems and their unique technical installation requirements plus how to prepare a good cost estimate. Landscape lighting provides exterior security, comfort and adds visually to the landscape canvas for both private and commercial properties.</td>
<td>Letter Grading</td>
<td>HT 244, HT 252</td>
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<td>HT 559</td>
<td>Plants in the Horticulture Industry: Identification and Culture</td>
<td>4</td>
<td>A comprehensive study of herbaceous and woody plants in the horticulture industry including morphology, classification, identification, and culture of common trees, shrubs, ground cover, perennials, annuals, ferns, ornamental grasses, and bulbs used in the Northeast.</td>
<td>Letter Grading</td>
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<td>HT 563</td>
<td>Landscape Construction</td>
<td>0 or 4</td>
<td>Materials and methods of landscape construction: grading and drainage, site preparation, transplanting, turf installation, pavements, walls, and retaining walls, wood structures. Introduction to construction drawings, specifications, estimating, and bidding. Special fee. Prereq: HT 405, 215. 4 lec.</td>
<td>Letter Grading</td>
<td>HT 263, HT 275</td>
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<td>HT 565</td>
<td>Turf Management</td>
<td>4</td>
<td>An introductory look at turf grass management; turf grass culture and physiology; identifying cool-season grasses; identifying and controlling turf grass pests (insect, diseases and weeds); controlling pests using traditional, biological and integrated (IPM) practices; establishing cool-season grasses; seed and sod installation; fertilization practices will be covered.</td>
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<td>HT 572</td>
<td>Landscape Design Studio</td>
<td>4</td>
<td>Principles of residential and commercial landscape design: site analysis, spatial organization, graphics and drafting, use of landscape fixtures and plant materials, final plans and specifications, cost estimates. Special fee. Prereq: HT 257 and HT 563. 2 lec/4-hr lab.</td>
<td>Letter Grading</td>
<td>HT 272</td>
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<td>HT 575</td>
<td>Hydroponics</td>
<td>0 or 2</td>
<td>Production of hydroponic crops in the greenhouse, focusing on systems management, plant nutritional management, crop types and production schedules. Includes lab in Thompson School production greenhouse range. Special fee. Prereq: HT 407 Plant Structure and Functioning or equivalent.</td>
<td>Letter Grading</td>
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<td>HT 576</td>
<td>Greenhouse Crop Production</td>
<td>2</td>
<td>All aspects of production of floriculture and food crops in the greenhouse for the spring season. Includes lab in our production greenhouse range. Special fee.</td>
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<td>HT 585</td>
<td>Fruit and Vegetable Production</td>
<td>3</td>
<td>Tree fruits (apple, pears, and peaches) small fruits (strawberries, raspberries, grapes and blueberries) and vegetables grown in New England will be covered. Information will emphasize the growing, maintenance and the marketing of fruits and vegetables from the garden center perspective. Special fee. 2 lec/1 lab.</td>
<td>Letter Grading</td>
<td>HT 286</td>
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**Credits:**
- HT 244, HT 252: 2
- HT 257, HT 563: 4
- HT 258, HT 276: 4
- HT 263, HT 275: 4
- HT 405, 215, HT 407: 2
- FORT 251: 2
- TSAS 205: 1
- CADD: 1
HT 591 - Studies  
Credits: 1-3  
Students who have the ability and adequate preparation to work independently may propose a contract to design a course or research project on a new topic not available through existing course offerings. The purpose of this research is to explore new areas in the student's field of study or to pursue course material in greater depth. Work is supervised by an appropriate faculty/staff member and credit varies depending on the proposed project/ research. Areas may include floriculture, floral design, nursery, landscape, and horticultural therapy. Permission required. Course may be repeated up to a maximum of 6 credits.  
Equivalent(s): HT 291  
Grade Mode: Letter Grading

HT 592 - Studies  
Credits: 1-3  
Students who have the ability and adequate preparation to work independently may propose a contract to design a course or research project on a new topic not available through existing course offerings. The purpose of this research is to explore new areas in the student's field of study or to pursue course material in greater depth. Work is supervised by an appropriate faculty/staff member and credit varies depending on the proposed project/research. Areas may include floriculture, floral design, nursery, landscape, and horticultural therapy. Permission required. Course may be repeated up to a maximum of 6 credits.  
Equivalent(s): HT 292  
Grade Mode: Letter Grading

HT 597 - Horticultural Work Experience  
Credits: 0  
A guided work experience in a student-selected area of horticulture, providing both a broad overview and a detailed understanding of work in the field. Contracting with an employer for 480 hours of career-oriented work, the student is assigned a wide variety of duties and responsibilities typical of that business or organization. Students maintain a detailed reflective journal of the experience, a portfolio-based summary report, and thorough self-evaluations. Cr/F.  
Equivalent(s): HT 297  
Grade Mode: Credit/Fail Grading