

HORTICULTURE - BS

This degree is structured to provide students with hands-on training, knowledge, and skills needed for producing, improving, managing, and marketing fruit, nut, vegetable, landscape, floral, and other ornamental crops or designing, building, and maintaining residential or small-scale commercial landscapes. This degree also prepares students for undertaking graduate studies so that they can pursue science, technology, research, and development-focused careers in life sciences. Career prospects range from managing the production of horticultural crops in fields and in controlled environments, managing landscape businesses for growing communities, designing sustainable residential landscapes of the future, working with clientele in botanic and community gardens to enhance urban environments, to growing and marketing fruits, nuts, and vegetables, including those for healthier lifestyles. Former students have become leaders in the horticulture industry or entrepreneurs owning their horticultural crop production, greenhouse, nursery, or landscape operations. Several others work in upper management of large corporations, facilitate the implementation and development of new horticultural products and production services, serve in educational institutions, government agencies, or community service organizations, or travel the world developing, improving, and marketing future horticultural crops.

Program Requirements

First Year

| | Semester Credit Hours |
|--|-----------------------|
| Fall | |
| BIOL 101 Botany or BIOL 111 or Introductory Biology I | 4 |
| HORT 281 Professions in Horticulture | 1 |
| Language, philosophy and culture (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture) | 3 |
| Mathematics (MATH or STAT prefix required) (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#mathematics) | 3 |
| Social and behavioral sciences (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#social-behavioral-sciences) | 3 |
| Semester Credit Hours | 14 |
| Spring | |
| HORT 201 Horticultural Science and Practices | 3 |
| HORT 202 Horticultural Science and Practices Laboratory | 1 |
| Communication (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication) | 3 |
| Creative arts (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts) ¹ | 3 |
| Government/Political science (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science) | 3 |

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| Mathematics (MATH or STAT prefix required) (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#mathematics) | 3 |
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Semester Credit Hours 16

Second Year

| Fall | | |
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| CHEM 119 | Fundamentals of Chemistry I | 4 |
| ECCB 205 | Fundamentals of Ecology | 3 |
| ENTO 201 | General Entomology | 3 |
| American history (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history) | | 3 |
| Government/Political science (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science) | | 3 |

Semester Credit Hours 16

Spring

| | | |
|-----------------------------------|---|---|
| CHEM 222 or CHEM 227 | Elements of Organic and Biological Chemistry or Organic Chemistry I | 3 |
| HORT 326 | Plant Propagation | 3 |
| Select one of the following: | | 3 |
| GENE 310 | Principles of Heredity | |
| GENE 320/ BIMS 320 | Biomedical Genetics | |
| HORT 404 | Plant Breeding | |
| SCSC 304 | Plant Breeding and Genetics | |
| Directed electives ^{1,2} | | 6 |

Semester Credit Hours 15

Third Year

| Fall | | |
|---------------------------------------|---|---|
| HORT 315 | Issues in Horticulture ³ | 3 |
| SCSC 301 | Soil Science | 4 |
| Horticultural Crop Production | | 3 |
| Select one of the following: | | |
| HORT 319 | Fruit and Nut Production | |
| HORT 325 | Vegetable Crop Production | |
| HORT 418 | Nut Culture | |
| HORT 419 | Viticulture and Small Fruit Culture | |
| HORT 420 | Concepts of Wine Production | |
| HORT 423 | Tropical Horticulture | |
| HORT 431 | Nursery Production and Management | |
| Plant Identification/Characterization | | 3 |
| Select one of the following: | | |
| HORT 306 | Trees and Shrubs for Sustainable Built Environments | |
| HORT 308 | Plants for Sustainable Landscapes | |
| Directed electives ^{1,2} | | 3 |

Semester Credit Hours 16

Spring

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| HORT 313 | Introduction to Plant Physiology | 3 |
| PLPA 301 | Plant Pathology | 3 |
| PLPA 303 | Plant Pathology Laboratory | 1 |
| Horticulture Crop Production | | 3 |

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| Select one of the following: | | |
| HORT 425 | Horticulture Landscape Installation | |
| HORT 426 | International Floriculture Marketing | |
| HORT 428 | Greenhouse Technology & Sustainable Crop Production Systems | |
| HORT 431 | Nursery Production and Management | |
| HORT 460 | Landscape Estimating, Bidding, and Operations | |
| Directed electives ^{1,2} | | 6 |
| Semester Credit Hours | | 16 |
| Fourth Year | | |
| Fall | | |
| HORT 481 | Seminar ⁴ | 2 |
| Horticulture Elective | | 3 |
| HORT 300-499 (http://catalog.tamu.edu/undergraduate/course-descriptions/hort/) ⁵ | | |
| American history (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history) | | 3 |
| Directed electives ^{1,2} | | 6 |
| Semester Credit Hours | | 14 |
| Spring | | |
| High Impact Learning | | 1 |
| Select one of the following: | | |
| HORT 400 | Field Studies in Horticulture | |
| HORT 484 | Internship | |
| HORT 485 | Directed Studies | |
| HORT 491 | Research | |
| Horticulture Elective | | 3 |
| HORT 300-499 (http://catalog.tamu.edu/undergraduate/course-descriptions/hort/) ⁵ | | |
| Communication (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication) | | 3 |
| Directed electives ^{1,2} | | 6 |
| Semester Credit Hours | | 13 |
| Total Semester Credit Hours | | 120 |

¹ The Graduation requirements include a requirement for 3 hours of International and Cultural Diversity (<http://catalog.tamu.edu/undergraduate/general-information/degree-information/international-cultural-diversity-requirements/>) courses and 3 hours of Cultural Discourse (<http://catalog.tamu.edu/undergraduate/general-information/degree-information/cultural-discourse-requirements/>) courses. A course satisfying a Core category, a college/department requirement, or a free or directed elective can be used to satisfy this requirement. See academic advisor.

² Hours to be selected from among the following AGEC 105, AGEC 216, AGEC 223, AGEC 300-499 (<http://catalog.tamu.edu/undergraduate/course-descriptions/agec/>); AGLS 101; AGSM 125, AGSM 201, AGSM 435, AGSM 300-499 (<http://catalog.tamu.edu/undergraduate/course-descriptions/agsm/>); ALEC 370, ALEC 371, ALEC 425, ALEC 478; ALED 339, ALED 340, ALED 341, ALED 344, ALED 426, ALED 440, ALED 441, ALED 494; ANSC 307, ANSC 487/FSTC 487; ATMO 201; BESC 201, BESC 204, BESC 300-499 (<http://catalog.tamu.edu/undergraduate/course-descriptions/agsm/>);

BICH 410, BICH 411; BIOL 112, BIOL 113, BIOL 206, BIOL 213, BIOL 401, BIOL 451; CHEM 300-499 (<http://catalog.tamu.edu/undergraduate/course-descriptions/chem/>); COMM 203, COMM 205, COMM 210; COSC 253, COSC 354; ECCB 205, ECCB 215, ECCB 351, ECCB 408; ECON 202, ECON 203; ENGL 320; ENTO 201, ENTO 300-499 (<http://catalog.tamu.edu/undergraduate/course-descriptions/ento/>); FINC 409; FSTC 201, FSTC 324, FSTC 470/ANSC 470, FSTC 485; GENE 310, GENE 411/SCSC 411; HMGMT 201, HMGMT 300-499 (<http://catalog.tamu.edu/undergraduate/course-descriptions/hmgt/>); ISTM 209; MGMT 209, MGMT 300-499 (<http://catalog.tamu.edu/undergraduate/course-descriptions/mgmt/>); MKTG 300-499 (<http://catalog.tamu.edu/undergraduate/course-descriptions/mktg/>); NUTR 300/FSTC 300, NUTR 485; PHIL 314; PHYS 100-499 (<http://catalog.tamu.edu/undergraduate/course-descriptions/phys/>); RWFM 322, RWFM 411; SCSC 105, SCSC 205, SCSC 300-499 (<http://catalog.tamu.edu/undergraduate/course-descriptions/scsc/>); SPAN 101, SPAN 102, SPAN 201, SPAN 202, UGST 181, or hours to be selected with approval by the student's academic advisor and the associate department head from 100-400-level courses in ACCT (<http://catalog.tamu.edu/undergraduate/course-descriptions/acct/>), AGCJ (<http://catalog.tamu.edu/undergraduate/course-descriptions/agcj/>), AGECE (<http://catalog.tamu.edu/undergraduate/course-descriptions/agec/>), AGLS (<http://catalog.tamu.edu/undergraduate/course-descriptions/agls/>), ALEC (<http://catalog.tamu.edu/undergraduate/course-descriptions/alec/>), ANTH (<http://catalog.tamu.edu/undergraduate/course-descriptions/anth/>), ARTS (<http://catalog.tamu.edu/undergraduate/course-descriptions/arts/>), BESC (<http://catalog.tamu.edu/undergraduate/course-descriptions/besc/>), COMM (<http://catalog.tamu.edu/undergraduate/course-descriptions/comm/>), ECCB (<http://catalog.tamu.edu/undergraduate/course-descriptions/eccb/>), ECON (<http://catalog.tamu.edu/undergraduate/course-descriptions/econ/>), ENDS (<http://catalog.tamu.edu/undergraduate/course-descriptions/ends/>), ENTO (<http://catalog.tamu.edu/undergraduate/course-descriptions/ento/>), EPSY (<http://catalog.tamu.edu/undergraduate/course-descriptions/epsy/>), FINC (<http://catalog.tamu.edu/undergraduate/course-descriptions/finc/>), FSTC (<http://catalog.tamu.edu/undergraduate/course-descriptions/fstc/>), GENE (<http://catalog.tamu.edu/undergraduate/course-descriptions/gene/>), GEOG (<http://catalog.tamu.edu/undergraduate/course-descriptions/geog/>), HLTH (<http://catalog.tamu.edu/undergraduate/course-descriptions/hlth/>), HMGMT (<http://catalog.tamu.edu/undergraduate/course-descriptions/hmgt/>), HORT (<http://catalog.tamu.edu/undergraduate/course-descriptions/hort/>), INST (<http://catalog.tamu.edu/undergraduate/course-descriptions/inst/>), ISTM (<http://catalog.tamu.edu/undergraduate/course-descriptions/istm/>), KINE (<http://catalog.tamu.edu/undergraduate/course-descriptions/kine/>), LAND (<http://catalog.tamu.edu/undergraduate/course-descriptions/land/>), MEPS (<http://catalog.tamu.edu/undergraduate/course-descriptions/meps/>), MGMT (<http://catalog.tamu.edu/undergraduate/course-descriptions/mgmt/>), MKTG (<http://catalog.tamu.edu/undergraduate/course-descriptions/mktg/>), NUTR (<http://catalog.tamu.edu/undergraduate/course-descriptions/nutr/>), PBSI (<http://catalog.tamu.edu/undergraduate/course-descriptions/pbsi/>), RWFM (<http://catalog.tamu.edu/undergraduate/course-descriptions/rwfm/>), SCSC (<http://catalog.tamu.edu/undergraduate/course-descriptions/scsc/>), SCMT (<http://catalog.tamu.edu/undergraduate/course-descriptions/scmt/>), SOCI (<http://catalog.tamu.edu/undergraduate/course-descriptions/soci/>), SPAN (<http://catalog.tamu.edu/undergraduate/course-descriptions/span/>), SPED (<http://catalog.tamu.edu/undergraduate/course->

descriptions/sped/), STAT (<http://catalog.tamu.edu/undergraduate/course-descriptions/stat/>).

³ This course fulfills a writing intensive course requirement.

⁴ This course fulfills a communications requirement.

⁵ Hours to be selected based on the emphasis area chosen in consultation with the student's academic advisor.