HORTICULTURE - BS

This program offers hands-on training in horticulture and landscape management, preparing students for diverse careers and advanced studies in life sciences.

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		
Fall		**Semester Credit Hours**
BIOL 101 or BIOL 111	Botany or Introductory Biology I	4
HORT 281	Professions in Horticulture	1
Language, philosophy and culture (https://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture)		3
Mathematics (MATH or STAT prefix required) (https://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#mathematics)		3
Social and behavioral sciences (https://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#social-behavioral-sciences)		3
	Semester Credit Hours	**14**
Spring		
HORT 201	Horticultural Science and Practices [1]	3
HORT 202	Horticultural Science and Practices Laboratory	1
Communication (https://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication)		3
Creative arts (https://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts) [2]		3
Government/Political science (https://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science)		3
Mathematics (MATH or STAT prefix required) (https://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#mathematics)		3
	Semester Credit Hours	**16**
Second Year		
Fall		
CHEM 119	Fundamentals of Chemistry I	4
ECCB 205	Fundamentals of Ecology	3
ENTO 201	General Entomology	3
American history (https://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history)		3
Government/Political science (https://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	4
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 [2,3]		5
	Semester Credit Hours	**15**
Third Year		
Fall		
HORT 315	Issues in Horticulture [4]	3
SCSC 301	Soil Science	4
Horticultural Crop Production		
Select one of the following:		3
HORT 319	Fruit and Nut Production	
HORT 325	Vegetable Crop Production	
HORT 411	Hydroponic and Soilless 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		
Select one of the following:		3
HORT 306	Trees and Shrubs for Sustainable Built Environments	
HORT 308	Plants for Sustainable Landscapes	
Directed electives [2,3]		3
	Semester Credit Hours	**16**

Spring		
HORT 313	Introduction to Plant Physiology	3
PLPA 301	Plant Pathology	3
PLPA 303	Plant Pathology Laboratory	1
Horticulture Crop Production		
Select one of the following:		3
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 [2,3]		6
	Semester Credit Hours	**16**
Fourth Year		
Fall		
HORT 481	Seminar [5]	2
Horticulture Elective		3
HORT 300-499 (https://catalog.tamu.edu/undergraduate/course-descriptions/hort/) [6]		
American history (https://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history)		3
Directed electives [2,3]		6
	Semester Credit Hours	**14**
Spring		
High Impact Learning		
Select one of the following: [4]		1
HORT 400	Field Studies in Horticulture	
HORT 484	Internship	
HORT 485	Directed Studies	
HORT 491	Research	
Communication (https://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication)		3
Horticulture Elective		3
HORT 300-499 (https://catalog.tamu.edu/undergraduate/course-descriptions/hort/) [6]		
Directed electives [2,3]		6
	Semester Credit Hours	**13**
	Total Semester Credit Hours	**120**

1 For all HORT majors and minors, a C or better is required in HORT 201.

2 The Graduation requirements include a requirement for 3 hours of International and Cultural Diversity (https://catalog.tamu.edu/undergraduate/general-information/degree-information/international-cultural-diversity-requirements/) courses and 3 hours of Cultural Discourse (https://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.

3 Hours to be selected from among the following AGEC 105, AGEC 216, AGEC 223, AGEC 300-499 (https://catalog.tamu.edu/undergraduate/course-descriptions/agec/); AGLS 101; AGSM 125, AGSM 201, AGSM 435, AGSM 300-499 (https://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 (https://catalog.tamu.edu/undergraduate/course-descriptions/besc/); BICH 410, BICH 411; BIOL 112, BIOL 113, BIOL 206, BIOL 213, BIOL 349, BIOL 401; CHEM 300-499 (https://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, ENT0 300-499 (https://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; HMGT 201, HMGT 300-499 (https://catalog.tamu.edu/undergraduate/course-descriptions/hmgt/); ISTM 209; MGMT 209, MGMT 300-499 (https://catalog.tamu.edu/undergraduate/course-descriptions/mgmt/); MKTG 300-499 (https://catalog.tamu.edu/undergraduate/course-descriptions/mktg/); NUTR 300/FSTC 300, NUTR 485; PHIL 314; PHYS 100-499 (https://catalog.tamu.edu/undergraduate/course-descriptions/phys/); RWFM 322, RWFM 411; SCSC 105, SCSC 205, SCSC 300-499 (https://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 (https://catalog.tamu.edu/undergraduate/course-descriptions/acct/), AGCJ (https://catalog.tamu.edu/undergraduate/course-descriptions/agcj/), AGEC (https://catalog.tamu.edu/undergraduate/course-descriptions/agec/), AGLS (https://catalog.tamu.edu/undergraduate/course-descriptions/agls/), ALEC (https://catalog.tamu.edu/undergraduate/course-descriptions/alec/), ANTH (https://catalog.tamu.edu/undergraduate/course-descriptions/anth/), ARTS (https://catalog.tamu.edu/undergraduate/course-descriptions/arts/), BESC (https://catalog.tamu.edu/undergraduate/course-descriptions/besc/), COMM (https://catalog.tamu.edu/undergraduate/course-descriptions/comm/), ECCB (https://catalog.tamu.edu/undergraduate/course-descriptions/eccb/), ECON (https://catalog.tamu.edu/undergraduate/course-descriptions/econ/), ENDS (https://catalog.tamu.edu/undergraduate/course-descriptions/ends/), ENTO (https://catalog.tamu.edu/undergraduate/course-descriptions/ento/), EPSY (https://catalog.tamu.edu/undergraduate/course-descriptions/epsy/), FINC (https://catalog.tamu.edu/undergraduate/course-descriptions/finc/), FSTC (https://catalog.tamu.edu/undergraduate/course-descriptions/fstc/), GENE (https://catalog.tamu.edu/undergraduate/course-descriptions/gene/), GEOG (https://catalog.tamu.edu/undergraduate/course-descriptions/geog/), HLTH (https://catalog.tamu.edu/undergraduate/course-descriptions/hlth/), HMGT (https://catalog.tamu.edu/undergraduate/course-descriptions/hmgt/), HORT (https://catalog.tamu.edu/undergraduate/course-descriptions/hort/), INST (https://catalog.tamu.edu/undergraduate/course-descriptions/inst/), ISTM (https://catalog.tamu.edu/undergraduate/course-descriptions/istm/), KINE (https://catalog.tamu.edu/undergraduate/course-descriptions/kine/), LAND (https://catalog.tamu.edu/undergraduate/course-descriptions/land/), MEPS (https://catalog.tamu.edu/undergraduate/course-descriptions/meps/), MGMT (https://catalog.tamu.edu/undergraduate/course-descriptions/mgmt/), MKTG (https://catalog.tamu.edu/undergraduate/course-descriptions/mktg/), NUTR (https://catalog.tamu.edu/undergraduate/course-descriptions/nutr/), PBSI (https://catalog.tamu.edu/undergraduate/course-descriptions/pbsi/), RWFM (https://catalog.tamu.edu/undergraduate/

course-descriptions/rwfm/), SCSC (https://catalog.tamu.edu/undergraduate/course-descriptions/scsc/), SCMT (https://catalog.tamu.edu/undergraduate/course-descriptions/scmt/), SOCI (https://catalog.tamu.edu/undergraduate/course-descriptions/soci/), SPAN (https://catalog.tamu.edu/undergraduate/course-descriptions/span/), SPED (https://catalog.tamu.edu/undergraduate/course-descriptions/sped/), STAT (https://catalog.tamu.edu/undergraduate/course-descriptions/stat/).

[4] This course fulfills a writing intensive course requirement.

[5] This course fulfills a communications requirement.

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