

HORTICULTURE - BACHELOR OF SCIENCE IN AGRICULTURE

Horticulture includes a wide variety of topics that relate to fruit, vegetable and ornamental crops. Careers range from production management to processing and marketing, retail and wholesale management, greenhouse and nursery production, floriculture, landscaping, turf management, research and development, various service activities and positions with local, state and federal agencies.

Students must complete all University degree requirements, which include: General Education requirements, Viewing a Wider World requirements, and elective credits to total at least 120 credits with 48 credits in courses numbered 300/3000 or above. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

Prefix	Title	Credits
General Education		
<i>Area I: Communications</i>		10
<i>English Composition - Level 1</i> ¹		
<i>English Composition - Level 2</i>		
ENGL 2210G	Professional and Technical Communication Honors	
<i>Oral Communication</i> ¹		
<i>Area II: Mathematics</i>		
MATH 1220G	College Algebra ^{2,3}	3
<i>Area III/IV: Laboratory Sciences and Social/Behavioral Sciences</i>		11
CHEM 1215G	General Chemistry I Lecture and Laboratory for STEM Majors	
CHEM 1225G	General Chemistry II Lecture and Laboratory for STEM Majors	
<i>Area IV: Social & Behavioral Sciences Course (3 credits)</i> ¹		
<i>Area V: Humanities</i> ¹		3
<i>Area VI: Creative and Fine Arts</i> ¹		3
<i>General Education Elective</i>		
AGRO 1110G/ HORT 1115G	Introduction to Plant Science (Lecture & Lab)	4
Viewing A Wider World ^{3,4}		6
Departmental/College Requirements		
EPWS 303	Economic Entomology	3
EPWS 310	Plant Pathology	4
EPWS 314	Plant Physiology	3
HORT 2160	Plant Propagation	3
HORT 365	Principles of Crop Production	4
HORT 447	Seminar	1
SOIL 2110	Introduction to Soil Science	3
<i>Choose 21 credits from the following:</i> ³		21
HORT 2110	Ornamental Plants I	
HORT 2120	Ornamental Plants II	
HORT 2130	Floral Quality Evaluation and Design	
HORT 2990	Floriculture Field Practicum	
HORT 2996	Special Topics	
HORT 300	Special Topics	
HORT 302V	Forestry and Society	
HORT 304	Hydroponics	

HORT 305	Principles of Genetics	
HORT 307	Landscape Design	
HORT 310	Medicinal Herbs	
HORT 318V	Urban Water Issues and Society	
HORT 377	Introduction to Turfgrass Management	
HORT 378	Turfgrass Science	
HORT 391	Internship	
HORT 449	Special Problems	
HORT 450	Special Topics	
HORT 462	Plant Breeding	
HORT 471	Plant Mineral Nutrition	
HORT 479	Advanced Turfgrass Science	
HORT 483	Advanced Sustainable Crop Production	
HORT 488	Greenhouse Management	
HORT 492	Diagnosing Plant Disorders	
Choose 28 credits from the following:		28
A ST 311	Statistical Applications	
ACCT 2110	Principles of Accounting I	
ACCT 2120	Principles of Accounting II	
AEEC 2110	Principles of Food and Agribusiness Management	
AEEC 2140	Technology and Communication for Business Management	
AEEC 3210	Marketing and Food Agricultural Products	
AEEC 3110V	World Agriculture and Food Problems	
AEEC 4110	Food and Agribusiness Financial Management	
AGRO 303V	Genetics and Society	
AGRO 311	Introduction to Weed Science	
AGRO 483	Advanced Sustainable Crop Production	
ARTS 1610	Drawing I	
ARTS 2610	Drawing II	
AXED 3115	Small Engine Technology	
AXED 3120	Agricultural Structures	
BIOL 301	Principles of Ecology	
BIOL 313	Structure and Function of Plants	
BLAW 316	Legal Environment of Business	
BLAW 385V	Employment and Consumer Law	
BUSA 1110	Intro to Business	
CHEM 2120	Integrated Organic Chemistry and Biochemistry (CHEM 2120 must be taken with associated 1-cr CHEM lab)	
or ANSC 1170	Introduction to Animal Metabolism	
ECON 2110G	Macroeconomic Principles	
ECON 2120G	Principles of Microeconomics	
EPWS 301	Agricultural Biotechnology	
EPWS 373	Fungal Biology	
FSTE 4110	Food Microbiology	
FSTE 4120	Food Chemistry	
GENE 305 L	Genetic Techniques	
GENE 315	Molecular Genetics	
GENE 320	Hereditary and Population Genetics	
MGMT 309	Human Behavior in Organizations	
MGMT 332	Human Resources Management	
MKTG 303	Principles of Marketing	
MKTG 313	Retail Management	
SOIL 2110L	Introduction to Soil Science Laboratory	
SOIL 312	Soil Management and Fertility	

SOIL 312 L	Soil Management and Fertility Lab	
SOIL 456	Irrigation and Drainage	
SOIL 476	Soil Microbiology	
SPAN 1110	Spanish I	
SPAN 1120	Spanish II	
SPAN 2110	Spanish III	
Non-Departmental Requirements (in addition to Gen.Ed/VWW)		
BIOL 2110G	Principles of Biology: Cellular and Molecular Biology	3
Electives to bring the total credit to 120 ⁵		7
Total Credits		120

¹ See the General Education (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/>) section of the catalog for a full list of courses

² MATH 1220G College Algebra is required for the degree but students may need to take any prerequisites needed to enter MATH 1220G first.

³ Requires a grade of C- or above in horticulture courses.

⁴ See the Viewing a Wider World (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext>) Section of the catalog for a full list of courses.

⁵ Elective credit may vary based on prerequisites, dual credit, AP credit, double majors, and/or minor coursework. The amount indicated in the requirements list is the amount needed to bring the total to 120 credits and may appear in variable form based on the degree. However, students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

A Suggested Plan of Study for Students

This roadmap assumes student placement in MATH 1220G College Algebra and ENGL 1110G Composition I. The contents and order of this roadmap may vary depending on initial student placement in mathematics and English. It is only a suggested plan of study for students and is not intended as a contract. Course availability may vary from fall to spring semester and may be subject to modification or change.

First Year		
Semester 1		Credits
ENGL 1110G	Composition I ¹	4
MATH 1220G	College Algebra ¹	3
HORT 1115G	Introductory Plant Science	4
Area IV: Social and Behavioral Science Course ²		3
ACES 1120	Freshman Orientation	1
Credits		15
Semester 2		
ENGL 2210G	Professional and Technical Communication Honors ¹	3
CHEM 1215G	General Chemistry I Lecture and Laboratory for STEM Majors ¹	4
Area V: Humanities Course ²		3
HORT Elective Course		3
HORT Elective Course		3
Credits		16

Second Year

Semester 1

ACOM 1130G	Effective Leadership and Communication in Agriculture or COMM 1115G Agriculture or Introduction to Communication	3
CHEM 1225G	General Chemistry II Lecture and Laboratory for STEM Majors ¹	4
BIOL 2110G	Principles of Biology: Cellular and Molecular Biology	3
Area VI: Creative and Fine Arts Course ²		3
HORT Elective Course		3
Credits		16

Semester 2

SOIL 2110	Introduction to Soil Science ¹	3
EPWS 303	Economic Entomology (Spring Only) ¹	3
HORT 2160	Plant Propagation	3
VWW: Viewing a Wider World Course ³		3
HORT Elective Course		3
Credits		15

Third Year

Semester 1

EPWS 310	Plant Pathology (Fall Only) ¹	4
HORT Prefix Course		3
HORT Prefix Course		3
HORT Prefix Course		3
VWW: Viewing a Wider World Course ³		3
Credits		16

Semester 2

EPWS 314	Plant Physiology	3
HORT Upper-Division Prefix Course		3
HORT Upper-Division Prefix Course		3
HORT Upper-Division Elective Course		3
HORT Upper-Division Elective Course		3
Credits		15

Fourth Year

Semester 1

HORT 365	Principles of Crop Production	4
HORT Elective Course		3
HORT Upper-Division Prefix Course		3
HORT Upper-Division Prefix Course		3
Upper-Division Elective Course		3
Credits		16

Semester 2

HORT 447	Seminar	1
HORT Upper-Division Elective Course		4
Elective Course		3
Elective Course		3
Credits		11
Total Credits		120

¹ These courses have prerequisites and it is the students responsibility to check and fulfill all course prerequisites listed for these courses.

² See the General Education (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/>) section of the catalog for a full list of courses.

³ **HORT Elective Courses:**

- HORT 2110 Ornamental Plants I
- HORT 2120 Ornamental Plants II
- HORT 2130 Floral Quality Evaluation and Design
- HORT 2990 Floriculture Field Practicum
- HORT 300 Special Topics
- HORT 302V Forestry and Society
- HORT 304 Hydroponics
- HORT 305 Principles of Genetics
- HORT 307 Landscape Design
- HORT 310 Medicinal Herbs
- HORT 318V Urban Water Issues and Society
- HORT 377 Introduction to Turfgrass Management
- HORT 378 Turfgrass Science
- HORT 391 Internship
- HORT 449 Special Problems
- HORT 450 Special Topics
- HORT 462 Plant Breeding
- HORT 471 Plant Mineral Nutrition
- HORT 479 Advanced Turfgrass Science
- HORT 483 Advanced Sustainable Crop Production
- HORT 488 Greenhouse Management
- HORT 492 Diagnosing Plant Disorders

- GENE 320 Hereditary and Population Genetics
- MGMT 309 Human Behavior in Organizations
- MGMT 332 Human Resources Management
- MKTG 303 Principles of Marketing
- MKTG 313 Retail Management
- SOIL 2110L Introduction to Soil Science Laboratory
- SOIL 312 Soil Management and Fertility/SOIL 312 L Soil Management and Fertility Lab
- SOIL 456 Irrigation and Drainage
- SOIL 476 Soil Microbiology
- SPAN 1110 Spanish I
- SPAN 1120 Spanish II
- SPAN 2110 Spanish III

⁵ See the Viewing a Wider World (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext>) section of the catalog for a full list of courses.

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- **Horticulture Core Courses:**
- A ST 311 Statistical Applications
- ACCT 2110 Principles of Accounting I
- ACCT 2120 Principles of Accounting II
- AEEC 2110 Principles of Food and Agribusiness Management
- AEEC 2140 Technology and Communication for Business Management
- AEEC 3210 Marketing and Food Agricultural Products
- AEEC 3110V World Agriculture and Food Problems
- AEEC 4110 Food and Agribusiness Financial Management
- AGRO 303V Genetics and Society
- AGRO 311 Introduction to Weed Science
- AGRO 483 Advanced Sustainable Crop Production
- ARTS 1610 Drawing I
- ARTS 2610 Drawing II
- AXED 3115 Small Engine Technology
- AXED 3120 Agricultural Structures
- BIOL 301 Principles of Ecology
- BIOL 313 Structure and Function of Plants
- BLAW 316 Legal Environment of Business
- BLAW 385V Employment and Consumer Law
- BUSA 1110 Intro to Business
- ECON 2110G Macroeconomic Principles
- ECON 2120G Principles of Microeconomics
- EPWS 301 Agricultural Biotechnology
- EPWS 373 Fungal Biology
- FSTE 4110 Food Microbiology
- FSTE 4120 Food Chemistry
- GENE 305 L Genetic Techniques
- GENE 315 Molecular Genetics