

HORTICULTURE: CP

Certificate of Proficiency | 30 credit hours minimum

Area of Interest: Science, Technology, Engineering, and Math (STEM)

Program Website (<https://stlcc.edu/programs-academics/pathways/s-t-e-m/horticulture/>)

Academic Advising (<https://stlcc.edu/admissions/advising/>)

Program Description:

The Certificate of Proficiency in Horticulture focuses on the science and the art of horticulture through a combination of classroom theory, practical laboratory application, and on-the-job training. Courses in soils, plant diseases, integrated pest management, plant identification, plant culture, and cooperative horticulture are integral parts of the program. Students receive their training in the College's greenhouses, outdoor garden classroom, and laboratories. Students should enjoy working with plants and observing the growth process.

Graduates may specialize in landscape design, landscape management, greenhouse management, horticulture retail sales, and urban forestry. Employment opportunities include national, state, and city parks departments, landscape contracting firms, golf courses, retail sales, greenhouse growing, plant research or biotech companies, and retail garden centers.

Location. This program is offered in its entirety at Meramec.

Related Programs. The Horticulture Department offers an associate and a certificate in the following areas:

Cannabis and Hemp Production, Certificate of Specialization (<http://catalog.stlcc.edu/programs/cannabis-hemp-production-certificate-specialization/>)

Horticulture, Associate in Applied Science (<http://catalog.stlcc.edu/programs/horticulture-aas/>)

Cost of Attendance. For more information on cost of attendance visit **MoSCORES** (<https://scorecard.mo.gov/Search/>).

Program Career and Salary Information. Pursuant to Missouri HB 1606 (2018), information regarding the number of credit hours, program length, employment rate, wage data, and graduates employed in careers related to their program of study at St. Louis Community College can be found at the following URL: <https://scorecard.mo.gov/scorecard/> (https://www.google.com/url?q=https://scorecard.mo.gov/scorecard/&sa=D&ust=1555536894857000&usg=AFQjCNG1xf3E_i2lO96zEytILO-s5xaJCQ). Search using School / Program "St. Louis Community College" and choose the degree or credential type of interest.

The following limitations to the data apply: Information provided is based on the most recent cohorts available. Typically, most recent cohorts for wage and completion data are six years prior to the current academic year. Time to complete a program of study varies depending on the number of credit hours students earn per semester.

Interested in this program? Start the enrollment process by visiting the **Apply to STLCC** (<https://www.stlcc.edu/admissions/apply-to-stlcc/>) page.

At the completion of the program, students are expected to:

1. identify an array of plant material in a landscape, greenhouse, or garden center setting.
2. utilize soil test results for proper plant selection.
3. manage landscape areas and gardens using proper and professional methods of pruning, planting, and fertilizing.
4. develop a landscape maintenance schedule.
5. identify plant pests, insects, diseases, and weeds.
6. identify the botanical components of plants and their contributions to the life cycle of a plant.
7. manage plant pests, insects, diseases, and weeds using sustainable methods.
8. manage turf grass using proper methods of seeding, installing, watering, fertilizing, and mowing.
9. discuss the advantages to the local ecology offered by native plants.
10. grow a variety of plants in a greenhouse or landscape setting.
11. utilize plants according to their preferred culture and soil requirements.

Program of Study

Code	Title	Credit Hours
Horticulture Core		
HRT 101 or BIO 124	Introductory Horticulture General Botany I (MOTR BIOL 100LB)	4
HRT 102	Soils	3
HRT 105	Workplace Learning	2
HRT 206	Woody Plants - Trees and Vines	3
HRT 207	Woody Plants - Shrubs and Evergreens	3
HRT 230	Herbaceous Perennials and Ornamental Grasses	3
HRT 214	Landscape Management	3
HRT 227	Integrated Pest Management	3
Horticulture Electives		
Select 6 credit hours of the following:		
HRT 103	Plant Propagation	
HRT 104	Landscape Graphics	
HRT 106	Digital Applications in Landscape Design	
HRT 134	Micropropagation of Plants	
HRT 135	Introduction to Cannabis	
HRT 136	Cannabis and Hemp Cultivation	
HRT 137	Laboratory Methods for Cannabis Extraction	
HRT 140	Topics in Horticulture	
HRT 201	Turfgrass Management	
HRT 205	Nursery and Garden Center Practices	
HRT 217	Landscape Design I	
HRT 218	Landscape Design II	
HRT 220	Landscape Irrigation	
HRT 235	Annuals and Vegetables	
HRT 241	Greenhouse Management	
HRT 242	Urban Tree Management	
HRT 250	Native Landscaping Practices	

Total Credit Hours **30**

Part-Time Academic Plan

catalogs/) for your correct program requirements. Please speak with an advisor or the program coordinator for more information.

PLEASE NOTE: If you originally enrolled at STLCC prior to Fall 2025, you may need to view an **archived catalog** (<http://catalog.stlcc.edu/archived->

Code	Title	Hours	Prerequisites	Milestones/Notes
First Year				
Fall				
HRT 101 or BIO 124	Introductory Horticulture or General Botany I (MOTR BIOL 100LB)	4	Reading Proficiency	Exploratory Course, Gateway Course, Critical Course
XXX xxx	HRT Elective	3		Choose from HRT 106, HRT 134, HRT 135, HRT 140, HRT 201, HRT 205, HRT 217, HRT 220, HRT 241, HRT 242, and HRT 250. See footnote below.
HRT 206	Woody Plants - Trees and Vines	3	Concurrent or prior enrollment in HRT 101 or BIO 124 with a minimum grade of "C", and Reading Proficiency	Offered in the Fall semester only.
	Credit Hours	10		
Spring				
HRT 102	Soils	3	Concurrent or prior enrollment in HRT 101 or BIO 124 with a minimum grade of "C", and Reading Proficiency	
HRT 207	Woody Plants - Shrubs and Evergreens	3	Concurrent or prior enrollment in HRT 101 or BIO 124 with a minimum grade of "C", and Reading Proficiency	Offered in the Spring semester only.
XXX xxx	HRT Elective	3		Choose from HRT 103, HRT 104, HRT 106, HRT 136, HRT 137, HRT 140, HRT 218, HRT 241, and HRT 242. See footnote below.
	Credit Hours	9		
Summer				
HRT 230	Herbaceous Perennials and Ornamental Grasses	3	Concurrent or prior enrollment in HRT 101 or BIO 124 with a minimum grade of "C", and Reading Proficiency	Offered in the summer term only.
HRT 214	Landscape Management	3	Concurrent or prior enrollment in HRT 101 or BIO 124 with a minimum grade of "C", and Reading Proficiency	
If a student wishes to take HRT 235 to fulfill their Horticulture elective, they should take it in the summer term and adjust their academic plan accordingly.				See footnote below.
	Credit Hours	6		
Second Year				
Fall				
HRT 227	Integrated Pest Management	3	HRT 101 or BIO 124, HRT 206, HRT 207 with minimum grades of "C", and Reading Proficiency	

HRT 105	Workplace Learning	2	HRT 102, HRT 206, HRT 207, HRT 214, and HRT 230 with minimum grades of "C", approval of Horticulture Department Program Coordinator, and Reading Proficiency
	Credit Hours	5	
	Total Credit Hours	30	

¹ Horticulture Electives can be taken in any semester, provided the student has met the prerequisites. However, the following Horticulture courses that fulfill the Horticulture Elective requirement are only taught in the fall: HRT 134, HRT 135, HRT 201, HRT 205, HRT 217, HRT 220, and HRT 250. The following courses, that fulfill the Horticulture Elective requirement, are taught in both the fall and spring semester: HRT 106, HRT 140, HRT 241, and HRT 242.

² Horticulture Electives can be taken in any semester, provided the student has met the prerequisites. However, the following Horticulture courses that fulfill the Horticulture Elective requirement are only taught in the spring: HRT 103, HRT 104, HRT 136, HRT 137, and HRT 218. The following courses, that fulfill the Horticulture Elective requirement, are taught in both the fall and spring semester: HRT 106, HRT 140, HRT 241, and HRT 242.

³ Horticulture electives can be taken in any semester, provided the student has met the prerequisites. However, HRT 235, which fulfills the Horticulture elective is only taught in the summer.

Critical Courses: Critical courses are most important to a student's declared major and most strongly predict later success in the major. A critical course requires a minimal grade to progress to higher-level courses.

Exploratory Courses: Exploratory courses are first-semester courses that introduce the program and career field.

Gateway Courses: Gateway courses are courses in many career pathways that must be completed before progression in higher-level courses. These may be the same as critical and/or exploratory courses.

*Click on the hyperlinked course number to view additional information about the course.

**Students completing a course that has been assigned a MOTR number may transfer that course to any public institution in Missouri. Those who complete CORE 42 requirements will have that verification on their transcript.

*** It is your responsibility to verify that the courses listed above will transfer to the four-year institution of your choice. Maximize your transfer credits/classes by meeting with an academic advisor.