

Career Pathway: Plant Systems

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| <p>Get the Facts</p> <p>The Plant Systems Pathway encompasses the study of plant life cycles, classifications, functions, structures, reproduction, media and nutrients, as wells as growth and cultural practices through the study of crops, turf grass, trees, shrubs and/or ornamental plants</p> <p>Workforce Trends</p> <p>Nationwide, employment of landscape architects is projected to grown five percent through the year 2024.</p> | CAREER AND TECHNICAL EDUCATION | | | 18 | <p>Careers in Agriculture are:</p> <ul style="list-style-type: none">• High demand/High skill/High wage <p>Career Examples</p> <ul style="list-style-type: none">• Agronomist• Botanist• Greenhouse Manager• Soil Specialist• Crop Farmer• Landscape Management• Floriculturist• Plant Breeder <p>According to the Montana Department of Labor and Industry, the median hourly wage for occupations within Plant Systems is \$22.60.</p> |
| | Recommended Pathway Courses | | | | |
| | Students may select individual courses for exploration or a complete Pathway for an in-depth focus | | | | |
| | CLASS AVAILABILITY MAY VARY AT YOUR SCHOOL | | | | |
| | Course # | Foundation Courses (required) | Credit | | |
| | 18001 | Introduction to Agriculture (Ag I) | .5/1.0 | | |
| | 18051 | Plant Production/ Science | .50/1.0 | | |
| | 18052 | General Horticulture | 05./1.0 | | |
| | 18307 | Agriculture and Society | .50/1.0 | | |
| | Elective Courses | | | | |
| | 18002 | Agriculture- Comprehensive (Ag II) | .50/1.0 | | |
| | 18053 | Ornamental Horticulture | 0.5/1.0 | | |
| | 18054 | Turf and Landscape Management | 0.5/1.0 | | |
| | 18055 | Soil Science | .50/1.0 | | |
| | 18203 | Agricultural Leadership | 0.5/1.0 | | |
| | 18202 | Agricultural Entrepreneurship | 0.5/1.0 | | |
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| | 18098 | Plant Systems-Workplace Experience (SAE) | .50/1.0 | | |
| Foundation courses taken beyond the required credits can be used as elective credit. | | | 2.0 credits for completion | | |
| Additional CTE Credits are recommended for Pathway completion | | | | | |

| State Graduation Requirements | | Suggested High School Plan of Study | | | | College and Career |
|--|-----|---|-----------------------------------|---------------------------------|---------------------------------|---|
| High School Administrative Rules of Montana 10.55.905 | | 9th Grade Suggested | 10th Grade Suggested | 11th Grade Suggested | 12th Grade Suggested | Beyond High School There are many options for education and training beyond high school, depending on your career goals. <ul style="list-style-type: none">• Certificate• Associate degree• Bachelor’s degree• Professional degree• On-the-job training• Apprenticeship• Military training For more information on salary projections, labor market demand, and training options, visit lmi.mt.gov . |
| English/Language Arts | 4.0 | English 9 1.0 | English 10 1.0 | English 11 1.0 | English 12 1.0 | |
| Mathematics | 2.0 | Math* 1.0 | Math* 1.0 | Math* 1.0 | Math* 1.0 | |
| Social Studies | 2.0 | Social Studies* .50/1.0 | Social Studies* .50/1.0 | U.S History 1.0 | U.S. Government 1.0 | |
| Science | 2.0 | Earth Science 1.0 | Biology 1.0 | Science Elective* | | |
| Health Enhancement | 1.0 | P.E./Health* .50 | P.E./Health* .50 | P.E./Health Electives* | | |
| Arts | 1.0 | Arts Courses* 1.0 | | | | |
| Career and Technical Education | 1.0 | Pathway Foundation Course .50/1.0 | Pathway Foundation Course .50/1.0 | Pathway Elective Course .50/1.0 | Pathway Elective Course .50/1.0 | |
| Work-Based Learning | | Participation in a Pathway-related work-based learning experience | | | | |
| Career and Technical Student Organization | | National FFA Organization | | | | |
| <ul style="list-style-type: none">• *Talk to your school counselor about requirements in the core curriculum. Core curriculum and elective requirements vary district to district.• Many CTE courses may qualify for dual enrollment credit, which in some cases may earn up to 1.0 credit toward Pathway completion. Talk to your school counselor about availability. | | <ul style="list-style-type: none">• Dual enrollment course offerings vary by school and district.• Many Montana post-secondary programs accept high school courses toward a two- and four-year degree through dual enrollment. Check with post-secondary campuses for details. | | | | |