



MONTANA CAREER PATHWAYS

Career and Technical Education



Area of Study: Agriculture, Food and Natural Resources

Career Pathway: Agricultural Mechanics and Construction

<p>Get the Facts</p> <p>Students interested in improving farming technology and enjoy problem solving should pursue the Montana Career Pathway in Agricultural Mechanics.</p> <p>Workforce Trends According to the U.S. Bureau of Labor Statistics (BLS) agricultural engineers could expect a slower-than-average increase in job opportunities - only 4% - between 2014 and 2024. Their mean annual salary, however, was \$78,490 in May 2015.</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="3" style="background-color: #000080; color: white;">CAREER AND TECHNICAL EDUCATION</th> <td style="width: 10%; text-align: center; vertical-align: middle;">18</td> </tr> <tr> <th colspan="3" style="background-color: #000080; color: white;">Recommended Pathway Courses</th> <td></td> </tr> <tr> <td colspan="3" style="text-align: center;">Students may select individual courses for exploration or a complete Pathway for an in-depth focus</td> <td></td> </tr> <tr> <th colspan="3" style="background-color: #000080; color: white;">CLASS AVAILABILITY MAY VARY AT YOUR SCHOOL</th> <td></td> </tr> <tr> <th style="width: 10%;">Course #</th> <th style="width: 60%;">Foundation Courses (required)</th> <th style="width: 15%;">Credit</th> <td></td> </tr> <tr> <td>18001</td> <td>Introduction to Agriculture (Ag I)</td> <td>.5/1.0</td> <td rowspan="3" style="vertical-align: middle; text-align: center;">} 1.0 credit</td> </tr> <tr> <td>18401</td> <td>Agricultural Mechanics, Equipment and Structures</td> <td>.50/1.0</td> </tr> <tr> <td>18307</td> <td>Agriculture and Society</td> <td>.50/1.0</td> </tr> <tr> <th colspan="3" style="background-color: #000080; color: white;">Elective Courses</th> <td></td> </tr> <tr> <td>18402</td> <td>Agricultural Mechanics and Equipment</td> <td>.50/1.0</td> <td rowspan="5" style="vertical-align: middle; text-align: center;">} 1.0 credit</td> </tr> <tr> <td>18403</td> <td>Agricultural Structures</td> <td>0.5/1.0</td> </tr> <tr> <td>18404</td> <td>Agricultural Welding</td> <td>0.5/1.0</td> </tr> <tr> <td>18203</td> <td>Agricultural Leadership</td> <td>0.5/1.0</td> </tr> <tr> <td>18202</td> <td>Agricultural Entrepreneurship</td> <td>0.5/1.0</td> </tr> <tr> <td>18448</td> <td>Agricultural Mechanics and Construction-Workplace Experience (SAE)</td> <td>.50/1.0</td> <td></td> </tr> <tr> <td colspan="3" style="text-align: center;">Foundation courses taken beyond the required credits can be used as elective credit. Additional CTE Credits are recommended for Pathway completion</td> <td style="text-align: center;">} 2.0 credits for completion</td> </tr> </table>	CAREER AND TECHNICAL EDUCATION			18	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	} 1.0 credit	18401	Agricultural Mechanics, Equipment and Structures	.50/1.0	18307	Agriculture and Society	.50/1.0	Elective Courses				18402	Agricultural Mechanics and Equipment	.50/1.0	} 1.0 credit	18403	Agricultural Structures	0.5/1.0	18404	Agricultural Welding	0.5/1.0	18203	Agricultural Leadership	0.5/1.0	18202	Agricultural Entrepreneurship	0.5/1.0	18448	Agricultural Mechanics and Construction-Workplace Experience (SAE)	.50/1.0		Foundation courses taken beyond the required credits can be used as elective credit. Additional CTE Credits are recommended for Pathway completion			} 2.0 credits for completion	<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"> • Welding • Agriculture Equipment Sales & Service • Agricultural Equipment Service • Service Technician • Agricultural Engineer • <p>According to the Montana Department of Labor & Industry, the median hourly wage for occupations within the Agricultural Mechanic Pathway is \$17.01.</p>
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State Graduation Requirements		Suggested High School Plan of Study				College and Career
High School <small>Administrative Rules of Montana 10.55.905</small>		9th Grade Suggested	10th Grade Suggested	11th Grade Suggested	12th Grade Suggested	<p>Beyond High School</p> <p>There are many options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none"> • Certificate • Associate degree • Bachelor's degree • Professional degree • On-the-job training • Apprenticeship • Military training <p>For more information on salary projections, labor market demand, and training options, visit lmi.mt.gov.</p>
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. 				