

# High School to College and Career Pathway: Secondary

Career and Technical Education: Preparing Students for College and Career!



## Area of Study: Agricultural Education

### Pathway: Agricultural Systems Technology

**Get the Facts**  
Utah agriculturists produce crops and livestock worth over \$1.5 billion annually. Students enrolled in high school agricultural courses are looking to join a \$1.5- billion industry in Utah and a \$300-billion industry nationwide.

**Workforce Trends**  
According to the U.S. Department of Labor, the growing interest in worldwide standardization of agricultural equipment should result in increased employment of agricultural engineers. Job opportunities should also result from the increasing demand for agricultural products, the continued efforts for more efficient agricultural production, and the increasing emphasis on the conservation of resources.

**CAREER AND TECHNICAL EDUCATION 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 HIGH SCHOOL**

Course #	Foundation Courses: (required)	Credit
01.0211	Agricultural Systems Technology I	1.00
01.0221	Agricultural Systems Technology II	1.00
<b>Elective Courses:</b>		
01.0111	Agricultural Business Management	1.00
01.0802	Agricultural Communication	1.00
01.0803	Agricultural Leadership	1.00
01.0241	Agricultural Machinery Technology	1.00
01.0231	Agricultural Mechanics, Advanced	1.00
01.0311	Agricultural Science I	1.00
02.0112	Biology-Agricultural Science	1.00
01.0121	Farm and Ranch Management	1.00
21.0707	Industrial/Agricultural Technology (IAT)	1.00
48.0508	Welding Technician – Entry Level	1.00
48.0510	Welding Technician – Intermediate Level	1.00
48.0512	Welding Technician – Advanced Level	1.00
01.0100	Summer Agriculture Program	.25
	Supervised Agriculture Experience Program (capstone experience)	
32.0199	Workplace Skills	.50

2.00 credits

1.00 credit

**3.00 credits for completion**

**Agricultural Systems Technology is:**  
> High skill  
> High demand

**Sample Career Occupations**  
> Agricultural Education Teacher  
> Agricultural Engineer  
> Agricultural Engineer Technician  
> Diesel Mechanic  
> Equipment Parts Manager  
> Environmental Tech.  
> Heavy Equipment Operator  
> Machinist  
> Recycling Technician  
> Welder

Middle School		State Requirements		High School Suggested Education Plan				College and Career
7th Grade	8th Grade	Middle School	High School	9th Grade Suggested	10th Grade Suggested	11th Grade Suggested	12th Grade Suggested	Beyond High School
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts 4.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	Language Arts 12 1.00	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none"> <li>&gt; Certificate</li> <li>&gt; Associate degree</li> <li>&gt; Bachelor's degree</li> <li>&gt; Professional degree</li> <li>&gt; On-the-job training</li> <li>&gt; Apprenticeship</li> <li>&gt; Military training</li> </ul> <p>For more information on salary projections, labor market demand, and training options, visit <a href="http://UtahFutures.org">UtahFutures.org</a>.</p>
Math * 1.00	Math * 1.00	2.00	Math 3.00	Math * 1.00	Math * 1.00	Math * 1.00		
Science .50	Science 1.00	1.50	Science 3.00	Earth Systems 1.00	Biology–Agricultural Science or Biological Science 1.00	Agricultural Science I 1.00		
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies 3.00	Geography for Life .50	World Civilizations .50	U.S. History II 1.00	U.S. Government and Citizenship .50	
P.E. 1.00	Health .50	1.50	P.E./Health 2.00	Participation Skills and Techniques .50	Fitness for Life .50 / Health Education .50 Lifetime Activities or Sport .50			
The Arts .50	The Arts .50	1.00	Fine Arts 1.50	Fine Arts Courses 1.50				
Keyboarding .50			Computer Tech. .50	Computer Technology .50				
College & Career Awareness 1.00		1.00	CTE 1.00	Refer to Career and Technical Education box above.				

> \* Talk to your school counselor about math requirements in the core curriculum. Core curriculum and elective requirements may vary district to district.  
> Many CTE courses may qualify for concurrent enrollment credit, which in some cases may earn up to 1.0 credit toward Pathway completion. Talk to your school counselor about availability.

> Concurrent enrollment course offerings vary by school and district.  
> Many Utah postsecondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional postsecondary Pathways for details.