

# Agriculture

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Our agriculture programs are unique to the state of Montana. Our coursework encompasses areas such as plant and animal science, range, animal and crop production, and commodity marketing, while integrating technology in areas such as computers, Global Position Systems and Geographic Information Systems. Students also have the option of including mechanics or business classes to better suit their career goals. These areas prepare student to work with the complex agriculture machinery, equipment and processes that use advanced technologies.

## **Agricultural Operations Technology, Agricultural Technology, and Applied Agriculture (verified)**

### **Objective**

Provide primary and advanced postsecondary agricultural courses and personal growth opportunities to those preparing for a 4-year agriculture degree and employment opportunities as progressive agricultural producers, agribusiness and natural resource managers and agricultural industry professionals

### **Learning Outcomes for Agricultural Operations Technology, BS**

Successful graduates of this program will have:

- Demonstrated proficiencies and understanding of basic and advanced agriculture production, agricultural sciences, agricultural technologies and agribusiness
- Enhanced their personal skill sets, academic and agricultural knowledge beneficial for success in both career and life
- Articulated a regional and global perspective of agriculture's role, components, complexities and its importance to society and our future

### **Objective**

Provide primary postsecondary agricultural courses and a 2-year agriculture degree featuring agricultural production, agricultural technologies and agribusiness to students preparing for careers related to farming and ranching, agricultural technology, agribusiness and for those wishing to continue their postsecondary agricultural education

### **Learning Outcomes for Agricultural Technology, AAS**

Successful graduates of this program will have:

- Demonstrated proficiencies in and an understanding of primary agricultural production, agricultural sciences, agricultural technologies and agribusiness
- Enhanced their personal skill sets, academic and agricultural knowledge beneficial for success in both work and life

### **Objective**

Provide primary and advanced agriculture coursework for students seeking a minor that will complement and enhance an allied 4-year degree program and broaden their career opportunities in agriculture

### **Learning Outcomes for Applied Agriculture, minor**

Successful graduates of this program will have:

- Demonstrated an understanding of core agricultural topics and verified knowledge and proficiencies in upper level agricultural selective courses required by the minor

## **Bachelor of Science Agricultural Operations Technology – Minor Required**

Learning outcomes: AOT Program graduates will demonstrate knowledge in agricultural production, technology and management.

<b>Code</b>	<b>Title</b>	<b>Credits</b>
General Education Core ( <a href="https://catalognow.msun.edu/general-education-core/general-education-core/">https://catalognow.msun.edu/general-education-core/general-education-core/</a> )		33
<b>Required Courses</b>		
ANSC 100	Introduction to Animal Science	3
AGSC 102	Agricultural Plant Science	3
AGBE 105	Ag Marketing	3
AGBE 125	Intro to Farm Management	3

AG 150	Intro to Ag Computing	3
ENSC 245	Soils (Meets CAT III Requirement)	4
AGSC 218	Crop Production	4
AGSC 230	Agricultural Pest Management	4
ANSC 202	Livestock Feeding & Nutrition	4
ANSC 262	Range Livstck Prod	3
NRSM 260	Rangeland Management	4
AGBE 353	Co-op Business Prin & Practice	2
AOT 301	Global Positioning Systems (CAT VII)	3
AGBE 305	Ag Commodity Marketing	3
AGSC 310	Soil & Water Management	2
AOT 315	Geographic Information Systems	3
AGTE 410	Agriculture Technology Mgt	4
AGBE 499	Capstone	3
AGSC 498	Cooperative Education	3
IT 100	Introduction to Technology (Meets CAT VII Requirement)	3
Minor Lower Division		12
Minor Upper Division		15
<b>Total minimum credits required for degree/minor</b>		<b>120</b>

## Associate of Applied Science

### Agricultural Mechanics Technology

Learning outcomes: The successful completion of assigned e-training on NAPAAutoTech.com (<http://NAPAAutoTech.com>) and DATO HVAC.

Code	Title	Credits
<b>Required General Education Courses</b>		
WRIT 101	College Writing I	3
Select one of the following: <sup>2</sup>		3
M 121	College Algebra	
COMX 111	Intro to Public Speaking <sup>3</sup>	3
or COMX 115	Intro to Interpersonal Communc	
<b>Required Courses</b>		
AGTE 230	Intro to Ag Machines & Equip	2
AGTE 120	Forage Implements	3
AGTE 130	Intro to Agricultural Tractors	3
AGTE 225	Intro to Grain Harvstng Equip	3
AGTE 210	Tlg, Plntg, Spray Implements	3
ATDI 134	Electrical/Electronic Sys I	6
ATDI 264	Electrical/Electronic Sys II	6
ATDI 265	Heating and Air Conditioning	4
DST 104	Intro to Diesel Engines	3
DST 114	Intro to Diesel Engines Lab	3
DST 115	Intro to Diesel Fuel Systems	5
DST 204	Intro to Hydraulics Pneumatics	2
DST 214	Intro to Hydr Pneumatics Lab	2
DST 216	Heavy Duty Power Trains	4
DST 264	Diesel Engine Diagnosis Repair	3
DST 274	Diag Diesel Engine Repair Lab	3
WLDG 110	Welding Theory I	2
WLDG 111	Welding Theory I Practical	2

WLDG 260	Repair & Maintenance Welding	3
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<b>Total minimum required credits for degree</b>		<b>71</b>
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<sup>1</sup> Meets Communications Requirement

<sup>2</sup> Meets Computation Requirement

<sup>3</sup> Meets Human Relations Requirement

## Agricultural Technology

Learning outcomes: Ag Tech (AAS) graduated will verify basic knowledge in agriculture sciences, agriculture business and agriculture technology

Code	Title	Credits
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### Required General Education Courses

WRIT 101	College Writing I	3
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Select one of the following: <sup>2</sup>		3
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M 121	College Algebra	
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COMX 111	Intro to Public Speaking <sup>3</sup>	3
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or COMX 115	Intro to Interpersonal Communc	
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### Required Courses

ANSC 100	Introduction to Animal Science	3
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AGSC 102	Agricultural Plant Science	3
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AGBE 105	Ag Marketing	3
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AGBE 125	Intro to Farm Management	3
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AG 150	Intro to Ag Computing	3
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ENSC 245	Soils (CAT III)	4
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AGSC 218	Crop Production	4
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AGSC 230	Agricultural Pest Management	4
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ANSC 202	Livestock Feeding & Nutrition	4
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ANSC 262	Range Livstck Prod	3
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NRSM 260	Rangeland Management	4
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IT 100	Introduction to Technology	3
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Advisor Approved Electives	12
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<b>Total minimum required credits for degree</b>		<b>62</b>
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<sup>1</sup> Meets Communications Requirement

<sup>2</sup> Meets Computation Requirement

<sup>3</sup> Meets Human Relations Requirement

## Minors

### Agricultural Mechanics Technology

Code	Title	Credits
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#### Required Courses

AGTE 230	Intro to Ag Machines & Equip	2
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AOT 301	Global Positioning Systems	3
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AGTE 410	Agriculture Technology Mgt	4
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TSCI 304	Fuels and Lubricants	3
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#### Selective Credits

Select two (2) of the following courses	8
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ATDI 134	Electrical/Electronic Sys I	
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DST 204	Intro to Hydraulics Pneumatics	
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WLDG 110	Welding Theory I	
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#### Selective Credits

Select three (3) of the following courses	9
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AGTE 120	Forage Implements	
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AGTE 130	Intro to Agricultural Tractors	
AGTE 225	Intro to Grain Harvstng Equip	
AGTE 210	Tlg, Plntg, Spray Implements	
<b>Total minimum credits required for minor</b>		<b>29</b>

## Applied Agriculture

Code	Title	Credits
<b>Required Courses</b>		
ANSC 100	Introduction to Animal Science	3
AGSC 102	Agricultural Plant Science	3
AG 150	Intro to Ag Computing	3
AGBE 499	Capstone	3
Select a minimum of eight (8) credits from the following		8
ENSC 245	Soils (CAT III)	
AGSC 218	Crop Production	
ANSC 202	Livestock Feeding & Nutrition	
NRSM 260	Rangeland Management	
Select a minimum of six (6) upper division level credits from the following		6
AGSC 498	Cooperative Education	
AGBE 353	Co-op Business Prin & Practice	
AOT 301	Global Positioning Systems (CAT VII)	
AGBE 305	Ag Commodity Marketing	
AGSC 310	Soil & Water Management	
AOT 315	Geographic Information Systems	
AGTE 410	Agriculture Technology Mgt	
<b>Total minimum credits required for minor</b>		<b>26</b>