

**Focus Areas:**

Agribusiness, Agronomy,  
Livestock Production,  
Communications, Equine  
Science, Ag Engineering,  
Pre-Veterinarian,  
Horticulture

# AGRICULTURE & INDUSTRIAL TECHNOLOGY

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***Potential Careers:***

- Agronomist
- Ag & Food Science Technician
- Ranch Manager
- Agriculture Teacher/Professor
- Communications Specialist
- Professional Truck Driver
- Welder

## DEGREES & CERTIFICATES

Commercial Drivers License .....16-hour certificate  
 Welding.....18-hour certificate  
 Production & Services .....16-hour certificate  
 Production & Services .....30-hour certificate

Production & Services .....45-hour certificate  
 Production & Services ..... A.A.S. - 62 hours  
 Associate of Science ..... A.S. - 62 hours

*Ag Education majors, refer to the Education Program*

# AGRICULTURE & INDUSTRIAL TECHNOLOGY

## *Program Learning Outcomes*

### **Agriculture:**

#### **16-hour Certificate**

1. Perform agricultural calculations.
2. Describe multiple career opportunities in agriculture.

#### **30-hour Certificate:**

1. Perform agricultural calculations.
2. Describe multiple career opportunities in agriculture.
3. Explain technology uses in agriculture.

#### **45-hour Certificate:**

1. Perform agricultural calculations.
2. Describe multiple career opportunities in agriculture.
3. Explain technology uses in agriculture.
4. Identify agricultural production inputs and outputs.

#### **Associate of Applied Science:**

1. Perform agricultural calculations.
2. Describe multiple career opportunities in agriculture.
3. Explain technology uses in agriculture.
4. Identify agricultural production inputs and outputs.
5. Identify and describe effective agricultural advertising and their effects on the market.

#### **Associate of Science:**

1. Perform agricultural calculations.
2. Describe multiple career opportunities in agriculture.
3. Explain technology uses in agriculture.
4. Identify agricultural production inputs and outputs.
5. Discuss global market issues.

### **Commercial Drivers License:**

1. Demonstrate the safe operations of a commercial vehicle.
2. Demonstrate the skills to pass the State Commercial Driving License test.

### **Welding:**

1. Develop the cognitive and physical skills necessary to pass American Welding Society certifications.
2. Identify safe welding practices and procedures conforming to American Welding Society standards.



# AGRICULTURE & INDUSTRIAL TECHNOLOGY

## COMMERCIAL DRIVERS LICENSE

16-Hour Certificate

Required CDL Courses		16 cr
TD250	CDL Class A Truck Driving Training I	8
TD251	CDL Class A Truck Driving Training II	7
TD252	Defensive Driving For the Professional Truck Driver	1

## WELDING

18-Hour Certificate

Required General Education Courses		3 cr
<i>Mathematics and Statistics Discipline Area</i>		3
MA104 Technical Math (3 cr) <b>or</b> Mathematics General Education Course		

Required Welding Courses		15 cr
IE117	OSHA 10-Hour General Industry Training	1
IE125	Blueprint Reading and Cutting Processes	2
IE126	Shielded Metal Arc Welding	3
IE127	Gas Metal Arc Welding	3
IE128	Flux Core Arc Welding	3
IE129	Gas Tungsten Arc Welding	3



# AGRICULTURE & INDUSTRIAL TECHNOLOGY

## AGRICULTURE PRODUCTION & SERVICES

### 16-Hour Certificate

#### Required General Education Courses 3 cr

<i>Mathematics and Statistics Discipline Area</i>	3
MA110 Intermediate Algebra (3 cr) <b>or</b>	
MA104 Technical Math (3 cr) <b>or</b>	
Mathematics General Education Course	

#### Required Agriculture Courses 7 cr

AG101 Crop Science (4 cr) <b>or</b>	4
AG150 Introduction to Horticulture (4 cr)	
AG115 Animal Science (3cr) <b>or</b>	3
AG130 Principles of Agricultural Economics (3 cr)	

AG150 Introduction to Horticulture	4
AG166 Fundamentals of Livestock Nutrition	3
AG210 Agriculture Advertising & Design	3
AG220 Cooperative Ed Internship	1-4
AG225 Basic Equitation	3
AG226 Advanced Equitation	3
AG228 Focused Equitation	3

#### Elective Courses 6 cr

AG101 Crop Science	4
AG102 Intro to Plant Pest Control	3
AG105 Range Management	3
AG111 Animal Management	3
AG115 Animal Science	3
AG122 Introduction to Horsemanship	2
AG128 Animal Health & Nutrition	3
AG130 Principles of Ag Economics	3
AG132 Agriculture Management	3
AG134 Agricultural Marketing	3



# AGRICULTURE & INDUSTRIAL TECHNOLOGY

## AGRICULTURE PRODUCTION & SERVICES

### 30-Hour Certificate

#### Required General Education Courses 6 cr

<i>Mathematics and Statistics Discipline Area</i>	3
MA110 Intermediate Algebra (3 cr) <b>or</b>	
MA104 Technical Math (3 cr) <b>or</b>	
Mathematics General Education Course	

<i>Natural and Physical Science Discipline Area</i>	3
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#### Required Agriculture Courses 10 cr

AG101 Crop Science (4 cr) <b>or</b>	4
AG150 Introduction to Horticulture (4 cr)	
AG115 Animal Science (3cr)	3
AG130 Principles of Agricultural Economics (3 cr)	3

#### Elective Courses 14 cr

##### Economics

AG132 Agriculture Management	3
AG134 Agricultural Marketing	3
AG210 Agriculture Advertising and Design	3
AG220 Cooperative Ed Internship	1-6

##### Agronomy

AG101 Crop Science	4
AG102 Intro to Plant Pest Control	3
AG103 Plants & Soils for Crop Production	3
AG104 Soils	4
AG105 Range Management	3
AG106 Soil Classification and Evaluation	1
AG107 Agronomy ID & Experimentation	1
AG150 Introduction to Horticulture	4
AG220 Cooperative Ed Internship	1-6

##### Animal Science

AG111 Animal Management	3
AG118 Principles of Livestock Selection	2
AG119 Principles of Livestock Selection II	1
AG128 Animal Health & Nutrition	3
AG139 Farm Animal Reproduction	3
AG159 Equine Evaluation	1
AG166 Fundamentals of Livestock Nutrition	3
AG220 Cooperative Ed Internship	1-6

##### Equine Science

AG111 Animal Management	3
AG122 Introduction to Horsemanship	2
AG128 Animal Health & Nutrition	3
AG139 Farm Animal Reproduction	3
AG159 Equine Evaluation	1
AG165 Equine Evaluation II	1
AG166 Fundamentals of Livestock Nutrition	3
AG220 Cooperative Ed Internship	1-6
AG225 Basic Equitation	3
AG226 Advanced Equitation	3
AG228 Focused Equitation	3



# AGRICULTURE & INDUSTRIAL TECHNOLOGY

## AGRICULTURE PRODUCTION & SERVICES

### 45-Hour Certificate

#### Required General Education Courses 10 cr

<i>Communication Discipline Area</i>		3
CM115 Public Speaking (3 cr) <b>or</b>		
CM240 Interpersonal Communications (3 cr)		
<i>Mathematics and Statistics Discipline Area</i>		3
MA110 Intermediate Algebra (3 cr) <b>or</b>		
MA104 Technical Math (3 cr) <b>or</b>		
Mathematics General Education Course		
<i>Natural and Physical Science Discipline Area</i>		4

#### Required Agriculture Courses 13 cr

AG101 Crop Science (4 cr) <b>or</b>		
AG150 Introduction to Horticulture (4 cr)	4	
AG115 Animal Science (3cr)	3	
AG130 Principles of Agricultural Economics	3	
AG132 Agriculture Management <b>or</b>		
AG134 Agricultural Marketing	3	

#### Elective Courses 22 cr

<b>Business/Economics</b>		
AG132 Agriculture Management	3	
AG134 Agricultural Marketing	3	
AG210 Agriculture Advertising and Design	3	
BE161 Accounting I	3	
BE162 Accounting II	3	
BE188 Principles of Advertising	3	
AG220 Cooperative Ed Internship	1-6	

#### Agronomy

AG101 Crop Science	4
AG102 Intro to Plant Pest Control	3
AG103 Plants & Soils for Crop Production	3
AG104 Soils	4
AG105 Range Management	3
AG106 Soil Classification and Evaluation	1
AG107 Agronomy ID & Experimentation	1
AG150 Introduction to Horticulture	4
AG220 Cooperative Ed Internship	1-6

#### Animal Science

AG111 Animal Management	3
AG118 Principles of Livestock Selection	2
AG119 Principles of Livestock Selection II	1
AG128 Animal Health & Nutrition	3
AG139 Farm Animal Reproduction	3
AG159 Equine Evaluation	1
AG166 Fundamentals of Livestock Nutrition	3
AG220 Cooperative Ed Internship	1-6

#### Equine Science

AG111 Animal Management	3
AG122 Intro to Horsemanship	2
AG128 Animal Health & Nutrition	3
AG139 Farm Animal Reproduction	3
AG159 Equine Evaluation	1
AG165 Equine Evaluation II	1
AG225 Basic Equitation	3
AG226 Advanced Equitation	3
AG228 Focused Equitation	3



# AGRICULTURE & INDUSTRIAL TECHNOLOGY

## AGRICULTURE PRODUCTION & SERVICES

Associate of Applied Science - 62 Hours

### Required General Education Courses 19 cr

<i>English Discipline Area</i>		3
CM101 English Composition I (3 cr) <b>or</b>		
CM120 Survey of Technical Writing (3 cr)		
<i>Communication Discipline Area</i>		3
CM115 Public Speaking (3 cr) <b>or</b>		
CM240 Interpersonal Communications (3 cr)		
<i>Arts and Humanities Discipline Area</i>		3
Art	Humanities	
Music	Literature	
Theatre	Philosophy	
Foreign Language	History	
<i>Mathematics and Statistics Discipline Area</i>		3
MA110 Intermediate Algebra (3 cr) <b>or</b>		
MA104 Technical Math (3 cr) <b>or</b>		
Mathematics General Education Course		
<i>Natural and Physical Science Discipline Area</i>		4
Science Gen Ed with Lab		
<i>Social and Behavioral Science Discipline Area</i>		3
Economics	Anthropology	
Psychology	Political Science	
Sociology	Geography	

### Required Agriculture Courses 19 cr

AG101 Crop Science (4 cr) <b>or</b>		
AG150 Introduction to Horticulture (4 cr)	4	
AG115 Animal Science	3	
AG130 Principles of Agricultural Economics	3	
AG132 Agriculture Management	3	
AG134 Agricultural Marketing	3	
AG210 Agriculture Advertising and Design	3	

### Elective Courses 24 cr

#### Economics

AG217 Farm Computer Applications	3
AG220 Cooperative Ed Internship	1-6
BE100 Introduction to Business	3
BE160 Business Accounting	3
BE161 Accounting I	3
BE162 Accounting II	3
BE188 Principles of Advertising	3
MG102 Introduction to Entrepreneurship	3

#### Agronomy

AG101 Crop Science	4
AG102 Intro to Plant Pest Control	3
AG103 Plant & Soils for Crop Production	3
AG104 Soils	4
AG105 Range Management	3
AG106 Soil Classification	1
AG107 Agronomy Identification & Experimentation	1
AG112 Agronomy Identification & Experimentation II	1

AG150 Introduction to Horticulture	4
AG164 Advanced Soil Classification & Evaluation	1
AG220 Cooperative Ed Internship	1-6
BE152 Salesmanship	3
WE240 GIS/GPS	3

#### Animal Science

AG111 Animal Management	3
AG118 Principles of Livestock Selection I	2
AG119 Principles of Livestock Selection II	1
AG128 Animal Health and Nutrition	3
AG139 Farm Animal Reproduction	4
AG159 Equine Evaluation	1
AG166 Fundamentals of Livestock Nutrition	3
AG220 Cooperative Ed Internship	1-6

#### Equine Science

AG111 Animal Management	3
AG122 Introduction to Horsemanship	2
AG128 Animal Health & Nutrition	3
AG139 Farm Animal Reproduction	4
AG159 Equine Evaluation	1
AG165 Equine Evaluation II	1
AG166 Fundamentals of Livestock Nutrition	3
AG220 Cooperative Ed Internship	1-6
AG225 Basic Equitation	3
AG226 Advanced Equitation	3
AG228 Focused Equitation	3

Substitutions must be approved by the department chair.

**CLOUD**  
**AGRICULTURE**  
 cloud county community college

# AGRICULTURE & INDUSTRIAL TECHNOLOGY

## Associate of Science - 62 Hours

### Required General Education Courses 34 - 35 cr

<i>English Discipline Area (010)</i>	6
CM101 English Composition I (3 cr)	
CM102 English Composition II (3 cr)	
<i>Communication Discipline Area (020)</i>	3
CM115 Public Speaking (3 cr) <b>or</b>	
CM240 Interpersonal Communication (3 cr)	
<i>Mathematics and Statistics Discipline Area (030)</i>	3
MA111 College Algebra (3 cr)	
<i>Natural and Physical Science Discipline Area (040)</i>	4-5
<i>Social and Behavioral Discipline Area (050)</i>	6
(2 areas required)	
Anthropology	Economics
Geography	Psychology
Political Science	Sociology
<i>Arts and Humanities Discipline Area (060)</i>	6
(2 areas required)	
Art	Literature
Foreign Language	Music
History	Philosophy
Humanities	Theatre
<i>Institutionally Designated Area Elective (070)</i>	6

### Required Agriculture Courses 17-18 cr

AG101 Crop Science <b>or</b>	
AG150 Introduction to Horticulture	4
AG115 Animal Science	3
AG130 Principles of Agricultural Economics	3
AG210 Agriculture Advertising and Design	3
Natural and Physical Science Discipline Area	4-5

### Elective Courses 7-8 cr

<b>Agronomy</b>	
AG101 Crop Science	4
AG102 Intro to Plant Pest Control	3
AG103 Plant and Soils for Crop Prod.	3
AG104 Soils	4
AG105 Range Management	3
AG106 Soil Classification and Evaluation	1
AG107 Agronomy ID and Experimentation	1
AG108 Environmental Quality	3
AG109 Environmental Quality Lab	1
AG112 Agronomy ID and Experimentation II	1
AG150 Introduction to Horticulture	4
AG164 Advanced Soil Class and Evaluation	1
<b>Animal Science</b>	
AG111 Animal Management	3
AG118 Principles of Livestock Selection I	2
AG119 Principles of Livestock Selection II	1

AG123 Beef Science	3
AG128 Animal Health and Nutrition	3
AG139 Farm Animal Reproduction	4

### Business

AG132 Agriculture Management	3
AG134 Agricultural Marketing	3
AG217 Farm Computer Application I	3
BE100 Introduction to Business	3
BE152 Salesmanship	3
BE153 Personal Finance	3
BE160 Business Accounting	3
BE161 Accounting I	3
BE162 Accounting II	3
BE188 Principles of Advertising	3
MG102 Introduction to Entrepreneurship	3

### Communications

JN100 Mass Media in Society	3
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### Equine

AG122 Introduction to Horsemanship	2
AG125 Horse Science	3
AG159 Equine Evaluation	1
AG165 Equine Evaluation II	1
AG166 Fundamentals of Livestock Nutrition	3
AG188 Varsity Sports: Equestrian/Rodeo I	1
AG189 Varsity Sports: Equestrian/Rodeo II	1
AG225 Basic Equitation	3
AG226 Advanced Equitation	3
AG228 Focused Equitation	3

### Pre-Veterinarian

EC101 Principles of Macroeconomics	3
MA112 Trigonometry	3
MA114 Elementary Statistics	3
SC110 Principles of Biology I	5
SC111 Microbiology Lecture	3
SC112 Microbiology Lab	2
SC131 Chemistry I	5
SC132 Chemistry II	5
SC140 College Physics I	5
SC141 College Physics II	5
SC151 Principles of Biology II	5

### Additional Electives

AG220 Cooperative Ed Internship	1-6
WE240 GIS/GPS	3

### Open Electives 3 cr

Any non-technical, non-developmental course can be used to fulfill the requirements of the Associate of Science degree.