



# APS AGRICULTURAL MECHANICS

## Faculty

Brad Ramsdale, Ph.D., Professor of Agronomy

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## Mission

The Agricultural Production Systems is dedicated to embracing innovation and respecting tradition in the development of individuals for the agronomy, agricultural equipment, equine, and livestock industries.

Graduates of this major gain technical knowledge and skills for lifelong learning that are critical for successful careers in agriculture.

## Agricultural Production Systems Core

The following courses are required for all Associate of Applied Science degree options.

AGR 2903	INTERNSHIP	3
ECN 1103	INTRODUCTION TO AG ECONOMICS	3
ABM 2854	FARM & RANCH MANAGEMENT	4
ACT 1103	ACCOUNTING I	3
or ABM 2963	FARM, RANCH, AND SMALL BUSINESS RECORD KEEPING	
AGR 2982	AGRICULTURAL PRODUCTION SYSTEMS CAPSTONE	2
<b>Total Credit Hours</b>		<b>15</b>

## Agricultural Equipment Management Option-Associate of Applied Science Degree

- Students will be able to safely operate, troubleshoot and maintain agricultural equipment.

### Associate of Applied Science Core

Complete requirements	17
<b>Ag Production Systems Core</b>	<b>15</b>
Credit Hours Subtotal:	32

### Equipment Management Courses

Select 20 credits of the following:	20	
AEQ 1071	INDUSTRIAL SAFETY	
AEQ 1103	SMALL ENGINES	
AEQ 1171	FARM EQUIP & SAFETY	
AEQ 1203	WELDING	
AEQ 1313	INTERMEDIATE WELDING	
AEQ 1501	INTRODUCTION TO ELECTRIC CODE	
AEQ 1503	DC CIRCUIT ANALYSIS	
AEQ 1513	AC CIRCUIT ANALYSIS	
AEQ 1651	HARVEST OPERATIONS	
AEQ 2103	AG CHEMICAL APPLICATION	
AEQ 2303	EQUIP PREVENTATIVE MAINTENANCE	
AEQ 2213	ADVANCED WELDING	

AEQ 2323	PRECISION FARM TECH	
AEQ 2404	MECHANIZED IRRIGATION SYSTEMS	
AEQ 2522	METAL FABRICATION	
Credit Hours Subtotal:		20
<b>Electives</b>		
Advisor Guided Electives		15
Credit Hours Subtotal:		15
<b>Total Credit Hours</b>		<b>67</b>

## Agricultural Systems Technology Option-Associate of Science Degree (transfer)

- Students will demonstrate the knowledge required to effectively transition to a bachelor's degree in mechanized systems management.

### Associate of Science Core

Complete requirements	24
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### Mechanized Systems Management Core

ABM 2854	FARM & RANCH MANAGEMENT	
AEQ 1503	DC CIRCUIT ANALYSIS	
AEQ 1513	AC CIRCUIT ANALYSIS	
AGR 2304	SOIL FERTILITY	
AGR 1204	PRINCIPLES OF SOILS	
AGR 2403	CROP MANAGEMENT	
ASI 1304	ANIMAL MANAGEMENT	
ECN 1103	INTRODUCTION TO AG ECONOMICS	
Credit Hours Subtotal:		52

### Electives

Advisor Guided Electives	8
Credit Hours Subtotal:	8
<b>Total Credit Hours</b>	<b>60</b>

## Irrigation Technician Certificate

- Students will gain a foundational knowledge in electricity and mechanized irrigation systems in order to effectively and safely service, repair, troubleshoot, and install center-pivot systems.
- Students will be able to interact professionally with colleagues and clients.

AEQ 1071	INDUSTRIAL SAFETY	1
AEQ 1203	WELDING	3
AEQ 1501	INTRODUCTION TO ELECTRIC CODE	1
AEQ 1503	DC CIRCUIT ANALYSIS	3
AEQ 1513	AC CIRCUIT ANALYSIS	3
AEQ 2404	MECHANIZED IRRIGATION SYSTEMS	4
Advisor Guided Communication Elective		3
<b>Total Credit Hours</b>		<b>18</b>

## Agricultural Welding Certificate

- Students will be able to perform welding and fabrication technical skills.

- Students will be able to interact professionally with colleagues and clients.

AEQ 1071	INDUSTRIAL SAFETY	1
AEQ 1203	WELDING	3
AEQ 1313	INTERMEDIATE WELDING	3
AEQ 2213	ADVANCED WELDING	3
Advisor Guided Communication Elective		3
<b>Total Credit Hours</b>		<b>13</b>

1. Students will be able to effectively communicate in oral and written form.
2. Students will be able to gather, assimilate, and process information to reach sound logical conclusions in their chosen career pathway.
3. Students will be able to apply economic principles of accounting, marketing and budgeting to agricultural enterprises.
4. Students will be able to exhibit required knowledge and skills consistent with their chosen field of study. (Technical Competence)

## Ag Equipment Suggested Sequence of Study

Course	Title	Credit Hours
<b>First Year</b>		
<b>Fall</b>		
AEQ 1203	WELDING	3
AEQ 1501	INTRODUCTION TO ELECTRIC CODE	1
AEQ 1503	DC CIRCUIT ANALYSIS	3
AEQ 1513	AC CIRCUIT ANALYSIS	3
AGR 1661	AGRONOMY ORIENTATION	1
ECN 1103	INTRODUCTION TO AG ECONOMICS	3
SPC 1103	SALES COMM	3
<b>Credit Hours</b>		<b>17</b>
<b>Spring</b>		
AEQ 1071	INDUSTRIAL SAFETY	1
AEQ 1313	INTERMEDIATE WELDING	3
AEQ 2404	MECHANIZED IRRIGATION SYSTEMS	4
MTH 1403	AGRICULTURAL MATHEMATICS	3
ABM 2963	FARM, RANCH, AND SMALL BUSINESS RECORD KEEPING	3
ENG 1503	TECHNICAL COMMUNICATION I	3
<b>Credit Hours</b>		<b>17</b>
<b>Summer</b>		
AGR 2903	INTERNSHIP	3
<b>Credit Hours</b>		<b>3</b>
<b>Second Year</b>		
<b>Fall</b>		
AEQ 1103	SMALL ENGINES	3
AEQ 2213	ADVANCED WELDING	3
ABM 2854	FARM & RANCH MANAGEMENT	4
BIO 1313	PLANT SCIENCE	3
AGR 2823	INTRODUCTION TO GLOBAL AGRICULTURE AND NATURAL RESOURCES	3

BIO 1321	AGRONOMIC PLANT SCIENCE LABORATORY	1
<b>Credit Hours</b>		<b>17</b>
<b>Spring</b>		
AEQ 2303	EQUIP PREVENTATIVE MAINTENANCE	3
AEQ 2103	AG CHEMICAL APPLICATION	3
AGR 2982	AGRICULTURAL PRODUCTION SYSTEMS CAPSTONE	2
Electives		5
<b>Credit Hours</b>		<b>13</b>
<b>Total Credit Hours</b>		<b>67</b>

## Agricultural Systems Technology Transfer Suggested Sequence of Study

Course	Title	Credit Hours
<b>First Year</b>		
<b>Fall</b>		
AGR 1661	AGRONOMY ORIENTATION	1
AGR 1204	PRINCIPLES OF SOILS	4
BIO 1313	PLANT SCIENCE	3
BIO 1321	AGRONOMIC PLANT SCIENCE LABORATORY	1
SPC 1113	PUBLIC SPEAKING	3
ECN 1103	INTRODUCTION TO AG ECONOMICS	3
<b>Credit Hours</b>		<b>15</b>
<b>Spring</b>		
AGR 2304	SOIL FERTILITY	4
MTH 2252	TRIGONOMETRY	2
ENG 1903	WRITING & INQUIRY	3
Electives		3
<b>Credit Hours</b>		<b>12</b>
<b>Second Year</b>		
<b>Fall</b>		
AEQ 1503	DC CIRCUIT ANALYSIS	3
AEQ 1513	AC CIRCUIT ANALYSIS	3
MTH 2203	INTRODUCTION TO STATISTICS	3
ABM 2854	FARM & RANCH MANAGEMENT	4
ASI 1304	ANIMAL MANAGEMENT	4
<b>Credit Hours</b>		<b>17</b>
<b>Spring</b>		
AEQ 2323	PRECISION FARM TECH	3
AGR 2403	CROP MANAGEMENT	3
AGR 2823	INTRODUCTION TO GLOBAL AGRICULTURE AND NATURAL RESOURCES	3
CHM 1014	CHEMISTRY IN CONTEXT I	4
HTY 1303	AMERICAN HISTORY AFTER 1877	3
<b>Credit Hours</b>		<b>16</b>
<b>Total Credit Hours</b>		<b>60</b>