

**Associate of Applied Science – Agronomy Industry Management Option  
Course and Program Experience and Outcomes Matrix**

**Student Learning Outcomes**

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 agronomy enterprises.
4. Students will be able to exhibit required knowledge and skills consistent with their chosen field of study. (Technical Competence)
5. Learning outcome specific for the Agronomy (Crop Production) Option.
  - a. Students will be able to apply economically sound and environmentally sustainable agricultural crop production practices in the Great Plains.

Course Number	Course Name	SLO1	SLO2	SLO3	SLO4	SLO5
AGR 1091	Crop Practicum I		X	X	X	X
AGR 1591	Crop Practicum II		X	X	X	X
AGR 2091	Crop Practicum III		A	A	A	A
AGR 1103	Crop Science	X	X		X	X
AGR 1201	Soils Lab				X	X
AGR 1203	Principles of Soils		X		X	X
AGR 1213	Natural Resource Mgmt	X	X		X	X
AGR 1891	Crops Judging I				X	X
AGR 2892	Crops Judging II				X	X
AGR 2304	Soil Fertility		X		A	X
AGR 2354	Pest Management		X		A	X
AGR 2393	Irrigation Management		X		A	X
AGR 2404	Crop Management	X	A	X	A	A
AGR 2903	Internship	A			A	X
AGR 2943	Farm Capstone	A	A	A		
AEQ 2323	Precision Farming		X		X	X

“X” for courses or experiences in which students have the opportunity to learn the outcome.

“A” for courses or experiences in which student performance is used for program level assessment of the outcome.

**Associate of Applied Science – Diversified Agriculture Management Option:  
Course and Program Experience and Outcomes Matrix**

**Student Learning Outcomes**

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 agronomy enterprises.
4. Students will be able to exhibit required knowledge and skills consistent with their chosen field of study. (Technical Competence)
5. Learning outcome specific for the Diversified Agriculture Option.
  - a. Students will be able to apply economically sound and environmentally sustainable agricultural crop and livestock production practices in the Great Plains.

Course Number	Course Name	SLO1	SLO2	SLO3	SLO4	SLO5
AGR 1103	Crop Science	X	X		X	X
AGR 1201	Soils Lab				X	X
AGR 1203	Principles of Soils		X		A	A
AGR 1213	Natural Resource Mgmt	X	X		X	X
AGR 2304	Soil Fertility		X		X	X
AGR 2354	Pest Management		X		X	X
AGR 2393	Irrigation Management		X		X	X
AGR 2404	Crop Management	X	A	X	A	A
AGR 2903	Internship	A			A	X
AGR 2943	Farm Capstone	A	A	A		A
AEQ 2323	Precision Farming		X		X	X
ASI 1303	Animal Management		X		A	A
ASI 1253	Nutrition		X		X	X
ASI 1213	Livestock & Carcass Eval.		X		X	X
ASI 1204	Feedlot Operations		X		X	X
ASI 2353	Livestock Breeding		X		X	X
ASI 2774	Beef Production		X		A	A

“X” for courses or experiences in which students have the opportunity to learn the outcome.

“A” for courses or experiences in which student performance is used for program level assessment of the outcome.

**Associate of Applied Science – Ag Equipment Management Option  
Course and Program Experience and Outcomes Matrix**

**Student Learning Outcomes**

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 agronomy enterprises.
4. Students will be able to exhibit required knowledge and skills consistent with their chosen field of study. (Technical Competence)
5. Learning outcome specific for the Ag Equipment Management Option.
  - a. Students will be able to safely operate, troubleshoot and maintain agricultural equipment.

Course Number	Course Name	SLO1	SLO2	SLO3	SLO4	SLO5
AEQ 1103	Small Engines		X		X	X
AEQ 1153	Equipment Principles		A		A	A
AEQ 1203	Welding		X		A	A
AEQ 1172	Industrial Safety		X			X
AEQ 1303	Intermediate Welding		X		X	X
AEQ 1501	Intro to Electric Code		X		X	X
AEQ 1503	DC Circuit Analysis		X		X	X
AEQ 1513	AC Circuit Analysis		X		X	X
AEQ 2211	Hydraulics		X		X	X
AEQ 2214	Advanced Welding		X		X	X
AEQ 2303	Equip. Prevent. Maint.		A		A	A
AEQ 2323	Precision Farming		X		X	X
AEQ 2413	Diesel Engines		X		X	X
AEQ 2404	Mechanized Irrigation		X		X	X
AGR 2903	Internship	A			A	X
AGR 2943	Farm Capstone	A	A	A		

“X” for courses or experiences in which students have the opportunity to learn the outcome.

“A” for courses or experiences in which student performance is used for program level assessment of the outcome.

**Associate of Science (Transfer) – Agronomy Option  
Course and Program Experience and Outcomes Matrix**

**Student Learning Outcomes**

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 agronomy enterprises.
4. Students will be able to exhibit required knowledge and skills consistent with their chosen field of study. (Technical Competence)
5. Learning outcome specific for the Transfer Options.
  - a. Students will demonstrate a basic knowledge in the areas of biology, chemistry, mathematics, and oral/written communication along with a basic understanding of agriculture consistent with standards set for baccalaureate degrees.

Course Number	Course Name	SLO1	SLO2	SLO3	SLO4	SLO5
AGR 1091	Crop Practicum I		X	X	X	X
AGR 1591	Crop Practicum II		X	X	X	X
AGR 2091	Crop Practicum III		X	X	X	X
AGR 1103	Crop Science	X	X		X	X
AGR 1201	Soils Lab				X	X
AGR 1203	Principles of Soils		A		A	A
AGR 1213	Natural Resource Mgmt	X	X		X	X
AGR 1891	Crops Judging I				X	X
AGR 2892	Crops Judging II				X	X
AGR 2304	Soil Fertility		A		A	A
AGR 2354	Pest Management		X		X	X
AGR 2393	Irrigation Management		X		X	X
AGR 2404	Crop Management	A	A	A	A	A
AGR 2903	Internship	X			X	X
AGR 2943	Farm Capstone	X	X	X		
AEQ 2323	Precision Farming		X		X	X

“X” for courses or experiences in which students have the opportunity to learn the outcome.

“A” for courses or experiences in which student performance is used for program level assessment of the outcome.

**Associate of Science (Transfer) – Horticulture Option**  
**Course and Program Experience and Outcomes Matrix**

**Student Learning Outcomes**

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 agronomy enterprises.
4. Students will be able to exhibit required knowledge and skills consistent with their chosen field of study. (Technical Competence)
5. Learning outcome specific for the Transfer Options.
  - a. Students will demonstrate a basic knowledge in the areas of biology, chemistry, mathematics, and oral/written communication along with a basic understanding of agriculture consistent with standards set for baccalaureate degrees.

Course Number	Course Name	SLO1	SLO2	SLO3	SLO4	SLO5
AEQ 1103	Small Engines		X		X	
AGR 1201	Soils Lab				X	X
AGR 1203	Principles of Soils		A		A	A
AGR 1213	Natural Resource Mgmt	X	X		X	X
AGR 2304	Soil Fertility		A		A	A
HSL 1053	Landscape Appreciation	A	A			
HSL 1073	Landscape Plants I		X		A	
HSL 1173	Landscape Plants II		X		A	
HSL 1103	Plant Propagation		X		A	A
HSL 2324	Farmer's Market			A	X	
HST 2283	Landscape Management		X	X	X	
HST 1113	Turf Management		X		X	
HSL 2003	Internship	X			X	X

“X” for courses or experiences in which students have the opportunity to learn the outcome.

“A” for courses or experiences in which student performance is used for program level assessment of the outcome.

**Irrigation Technician Area of Concentration and Certificate  
Course and Program Experience and Outcomes Matrix**

**Student Learning Outcomes**

1. 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.
2. Students will be able to interact professionally with colleagues and clients.

Course Number	Course Name	SLO1	SLO2
AEQ 1172	Industrial Safety	X	
AEQ 1203	Welding	X	X
AEQ 1501	Intro to Electric Code	X	
AEQ 1503	DC Circuit Analysis	X	
AEQ 1513	AC Circuit Analysis	X	
AEQ 2404	Mechanized Irrigation Systems	A	X
MTH 1403	Ag Mathematics	X	
PSY 1011	Learning Communities		X
PSY 1103	Human Relations		A
SPC 1103	Sales Communication		A

“X” for courses or experiences in which students have the opportunity to learn the outcome.

“A” for courses or experiences in which student performance is used for program level assessment of the outcome.

**Ag Chemical Application Certificate and Area of Concentration  
Course and Program Experience and Outcomes Matrix**

**Student Learning Outcomes**

1. Students will be able to deliver, mix and apply agricultural chemicals safely and efficiently.
2. Students will be able to maintain and safely operate ag chemical application equipment.
3. Students will be able to interact professionally with colleagues and clients.

Course Number	Course Name	SLO1	SLO2	SLO3
AEQ 1153	Equipment Principles		X	
AEQ 2103	Ag Chemical Application	A	A	
AEQ 2301	Pesticide Certification	A		
AEQ 2303	Equipment Preventative Maintenance		X	
AEQ 2323	Precision Farming Technology		X	
AGR 2201	Commercial Ag Carrier	A		
AGR 2354	Pest Management	X		
MTH 1403	Ag Mathematics	X		
PSY 1011	Learning Communities			X
PSY 1103	Human Relations			A
SPC 1103	Sales Communication			A

“X” for courses or experiences in which students have the opportunity to learn the outcome.

“A” for courses or experiences in which student performance is used for program level assessment of the outcome.