



South Central College Program Design

AAS 3154 Agriculture Service Technician

Program Information

Instructional Level Associate Degree

Career Cluster Agriculture, Food & Natural Resources

Description

This degree provides an opportunity for study in the area of agricultural power and mechanization. The major areas of study include gasoline and diesel engine component repair including the support lubrication, cooling, air intake, exhaust, and basic fuel systems. Other areas of emphasis are power trains (clutches and transmissions), DC electrical systems and monitors, hydraulics, and diesel fuel systems (nozzles and injection pumps). In addition, safety, air conditioning and outdoor power products complete the technical course offerings. The curriculum will provide both basic and advanced technical instruction. This degree includes a Liberal Arts & Sciences component of 15 credits.

This is a program that prepares individuals to maintain and repair specialized farm, ranch, and agribusiness power equipment and vehicles. Includes instruction in the principles of diesel, combustion, electrical, hydraulic, and mechanical systems and their application to the maintenance of equipment; tractors and hauling equipment; planting and harvesting equipment; cutting equipment; power sources.

Mission

South Central College Agribusiness Department will provide postsecondary education to prepare students for their chosen agricultural careers and lifelong learning.

Program Admission Dates (Fall and/or Spring)

Fall and Spring

Program Location (North Mankato and/or Faribault)

North Mankato

Program Student Learning Outcomes

- 1 Perform assembly, repair, operation, and adjustment of machinery and power units
- 2 Conduct trouble shooting of agricultural power units and machinery
- 3 Diagnose and repair tractor systems and equipment
- 4 Perform parts department operations
- 5 Perform metal welding and fabrication

- 6 Perform work using appropriate safety practices
- 7 Demonstrate effective participation on an agribusiness team

Program Configurations

Fall Start

Credits

Technical Course	52
Liberal Arts & Sciences	15
Elective	5
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Total Credits	72

Semester 1 - Fall, Year 1

Course #	Course Title	Credits	Function
AGME 1801	Outdoor Power Equipment	3	Technical Course
AGME 1812	Machinery Assembly and Reconditioning I	2	Technical Course
AGME 1813	Machinery Assembly, Operation, Adjust. & Reconditioning II	2	Technical Course
AGME 1821	Precision Measuring Tools	1	Technical Course
AGME 1831	Tractor Power Trains	3	Technical Course
AGME 1891	Hydraulic Theory 1	1	Technical Course
AGME 1881	Parts Department Operation	1	Technical Course
AGME 1930	Ag Welding	2	Technical Course
LAS Credits	LAS Courses* Based on student need – see Advisor* TBD	3	Liberal Arts & Sciences

Semester 2 - Spring, Year 1

Course #	Course Title	Credits	Function
AGME 1822	Gas/Diesel Engine Repair I	3	Technical Course
AGME 1823	Engine Support	3	Technical Course
AGME 1861	Tractor Electrical	3	Technical Course
AGME 1923	Gas/Diesel Repair II	4	Technical Course
LAS Credits	LAS Courses* Based on student need – see Advisor*	3	Liberal Arts & Sciences

Summer Semester

Course #	Course Title	Credits	Function
AGME 2940	Agribusiness Service Technician Internship	11	Technical Course

Semester 3 - Fall, Year 2

Course #	Course Title	Credits	Function
AGME 2832	Hyd-Assist/Hydrostatic Transmissions	2	Technical Course
AGME 2841	Air Conditioning	1	Technical Course
AGME 2852	Introduction to Diesel	1	Technical Course
AGME 2892	Hydraulic Theory and Diagnosis	4	Technical Course
LAS Credits	LAS Courses* Based on student need – see Advisor*	6	Liberal Arts & Sciences
AGME 2882	Ag Tech Seminar	1	Elective

Semester 4 - Spring, Year 2

Course #	Course Title	Credits	Function
AGME 2863	Adv Ag Electrical	2	Technical Course
AGME 2853	Diesel Injection (Pumps)	3	Technical Course
LAS Credits	LAS Courses* Based on student need – see Advisor*	3	Liberal Arts & Sciences
Technical Electives	Based on student need -See Advisor	4	Elective

Program Course List

Number	Title	Credits	Pre/Corequisites
AGME 1801	Outdoor Power Equipment	3	Enrolled in Ag Service Technician Program
AGME 1812	Machinery Assembly and Reconditioning I	2	Enrolled in Ag Service Technician Program
AGME 1813	Machinery Assembly, Operation, Adjust. & Reconditioning II	2	Enrolled in Agriculture Service Tech Program
AGME 1821	Precision Measuring Tools	1	NONE
AGME 1822	Gas/Diesel Engine Repair I	3	None
AGME 1823	Engine Support	3	AGME1821 Taken in conjunction with AGME1822
AGME 1831	Tractor Power Trains	3	None
AGME 1861	Tractor Electrical	3	Enrolled in Ag Service Technician Program, or with instructor approval
AGME 1881	Parts Department Operation	1	None
AGME 1891	Hydraulic Theory 1	1	Enrolled in Ag Service Tech Program, or with instructor approval
AGME 1923	Gas/Diesel Repair II	4	Enrolled in the Agribusiness Service Technician Program
AGME 1930	Ag Welding	2	None
AGME 2832	Hyd-Assist/Hydrostatic Transmissions	2	AGME 1821

			AGME 1831
AGME 2841	Air Conditioning	1	None
AGME 2852	Introduction to Diesel	1	None
AGME 2853	Diesel Injection (Pumps)	3	None
AGME 2863	Adv Ag Electrical	2	Prerequisites: AGME861
AGME 2882	Ag Tech Seminar	1	None
AGME 2892	Hydraulic Theory and Diagnosis	4	None
AGME 2940	Agribusiness Service Technician Internship	9	To be developed on an individual basis. Enrolled in Agribusiness Service Technician Program
AGME 2945	Tractor/Equipment Repair I	3	Enrolled in Agriculture Service Technician Program
AGME 2946	Tractor/Equipment Repair II	4	AGME2945
AGME 2947	Tractor/Equipment Diagnosis and Repair	4	AGME2863 AGME 2945
PLSC 1205	Precision Agriculture	3	
SGAG 1000	Agribusiness Orientation	1	Enrolled in the Agribusiness Program