



Agricultural Operations Management

**Agricultural Sales
and Service**

**Agriculture
Program Clusters**

**Agricultural Marketing
and Finance**

Agricultural E-Agribusiness

Agriculture Transfer

Agriculture Technology Diploma

Agricultural Technology Division

Joshua Byrnes, Agriculture and Industrial Division Chair, 641-422-4202, byrnejos@niacc.edu
 Kevin Muhlenbruch, 641-422-4291, muhlekev@niacc.edu



The Agriculture Technology Diploma program is designed to provide students with the skills, aptitudes, and knowledge necessary to enter fields related to general agriculture. The program may be completed in two semesters by following the suggested curriculum, or it may be spread over three or more semesters.

Upon satisfactory completion of the prescribed curriculum with an average grade point of 2.00 (C), the student is awarded a diploma. This recognition is granted to a person who has completed 33 semester hours of credit at NIACC.

The curriculum is presented in a format that includes classroom work, laboratory instruction and practice. Situational projects in the area of livestock, crop, and business enterprise management are included in the program. The program offers students desiring more advanced education the option of applying completed course work toward an Associate of Applied Science Degree.

Career Opportunities

- Self-employed Farm or Business Management
- General Livestock or Crop Production
- Custom Livestock Feeding or Crop Production
- Animal Herdsman or Crop Technician
- Niche Market Production
- Agriculture-Related Sales

Required Courses/Suggested Schedule

(For students planning to complete the program in one academic year.)

First Year

First Term

AGA-154	Fundamentals of Soil Science	3 s.h.
AGS-109	Animal Science I	3 s.h.
AGS-110	Animal Science I Lab	1 s.h.
ENG-102	Composition & Speech I	4 s.h.
	Recommended Electives	6 s.h.
		17 s.h.

Second Term

AGA-114	Principles of Agronomy	3 s.h.
ACC-111	Introduction to Accounting.....	3 s.h.
AGS-209	Animal Science II	3 s.h.
AGS-210	Animal Science II Lab	1 s.h.
	Recommended Electives	6 s.h.
		16 s.h.

Total Program Hours **33 s.h.**

Recommended Elective Courses--Must complete 12 s.h. from the following:

AGA-854	Crop Production Lab	1 s.h.
AGA-855	Site Specific Crop Management	2 s.h.
AGA-860	Soils and Crop Management	2 s.h.
AGB-101	Agricultural Economics.....	3 s.h.
AGB-205	Introduction to Farm Operation	2 s.h.
AGB-213	Ag Real Estate Evaluation	2 s.h.
AGB-338	Salesmanship & Advertising	2 s.h.
AGB-436	Grain Merchandising	2 s.h.
AGB-438	Ag Futures & Future Options	2 s.h.
AGB-465	Ag Finance Management.....	2 s.h.
AGM-120	Basic Agricultural Mechanics	2 s.h.
AGP-331	Precision Agriculture	2 s.h.
AGS-227	Beef Cattle Production	2 s.h.
AGS-309	Livestock Production Lab I.....	1-2 s.h.
AGS-310	Livestock Production Lab II.....	1-2 s.h.
AGS-317	Animal Nutrition.....	2 s.h.
AGS-506	Swine Production	2 s.h.
AGS-811	Animal Technologies	1 s.h.
MAT-770	Applied Math	2 s.h.
MAT-771	Applied Math II	2 s.h.
SDV-210	Cooperative Education Internship.....	3 s.h.

Agricultural Operations Management

Agricultural Technology Division

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The Operations Management curriculum is designed to prepare students to farm, be farm managers, or work in a production field. It provides a sound academic foundation with emphasis on farm management, economics, business management, information management, precision agriculture, agronomy, animal science, human relations, and general education. Two eight-week internship experiences are required. **Upon successful completion, graduates will receive an Associate in Applied Science Degree.**

NIACC's Ag Advantage: *Champions of Agriculture--Providing high quality, vigorous education opportunities to students.*

- | | |
|--|-------------------------|
| * Innovative Curriculum | * Technology Emphasis |
| * Industry Partnerships | * Award-Winning Faculty |
| * Rewarding Internships | * Electronic Classrooms |
| * Hands-On Labs | * Satisfied Graduates |
| * Highly Regarded by Transfer Institutions | |

Transfer Opportunities: All classes required in our curriculum can be transferred to Iowa State University and/or Northwest Missouri State. Graduates can transfer to ISU as a junior and work toward a bachelor's degree in the College of Agriculture. Staff can advise you as to the best academic path for transfer.



NIACC Farm Lab: The NIACC Farm Lab consists of 260 no-till acres, 110 acres of pasture, livestock facilities for the swine and beef breeding herds, and provides Ag students with "hands-on" learning experiences in the areas of crop protection and management, precision farming technology, crop and livestock management, show pig and club calf production, and business planning and decision making.

Career Opportunities

Internships: Students in Operations Management complete two paid, eight-week internships. During your internships you will apply your academic skills in an actual work environment. The industry contacts made often lead to full-time employment following graduation.

Employment Opportunities: Jobs for Ag Operations Management graduates include self employed in farming, farm management, GPS/GIS service, production assistants, livestock production, herdspersons, crop production, crop input application, and sales.

Earning Potential: Entry-level salaries for recent NIACC agriculture technology graduates ranged between \$ 20,000 and \$ 50,000 annually.

Required Courses/Suggested Schedule

First Year

First Term

AGA-154	Fundamentals of Soil Science	3 s.h.
AGS-109	Animal Science I	3 s.h.
AGS-110	Animal Science I Lab	1 s.h.
BUS-161	Human Relations.....	3 s.h.
ENG-102	Composition & Speech I	4 s.h.
MAT-770	Applied Math	2 s.h.
MAT-771	Applied Math II	2 s.h.
		18 s.h.

Second Term

AGA-114	Principles of Agronomy	3 s.h.
AGB-101	Agricultural Economics.....	3 s.h.
ACC-111	Introduction to Accounting.....	3 s.h.
AGS-209	Animal Science II	3 s.h.
AGS-210	Animal Science II Lab	1 s.h.
BIO-196	Introduction to Bio-Technology.....	4 s.h.
		17 s.h.

Third Term

AGA-852	Principles of Crop Production	3 s.h.
AGP-331	Precision Agriculture	2 s.h.
AGS-811	Animal Technologies	1 s.h.
		6 s.h.

Second Year

Fourth Term

AGB-436	Grain Merchandising	2 s.h.
SDV-210	Cooperative Education Internship.....	4 s.h.
	Approved Ag Elective(s).....	8 s.h.
		14 s.h.

Fifth Term

AGB-465	Ag Finance Management.....	2 s.h.
AGM-120	Basic Agricultural Mechanics	2 s.h.
SDV-210	Cooperative Education Internship.....	4 s.h.
	Approved Ag Elective(s).....	8 s.h.
		16 s.h.

Total Program Hours **71 s.h.**

Recommended Agriculture Electives

AGA-854	Crop Production Lab	1 s.h.
AGA-855	Site Specific Crop Management	2 s.h.
AGA-860	Soils and Crop Management	2 s.h.
AGB-205	Introduction to Farm Operation	2 s.h.
AGB-213	Ag Real Estate Evaluation	2 s.h.
AGB-338	Salesmanship & Advertising	2 s.h.
AGB-438	Ag Futures & Future Options	2 s.h.
AGE-116	Horse Essentials & Equine Management	2 s.h.
AGS-227	Beef Cattle Production	2 s.h.
AGS-309	Livestock Production Lab I.....	1-2 s.h.
AGS-310	Livestock Production Lab II.....	1-2 s.h.
AGS-317	Animal Nutrition.....	2 s.h.
AGS-506	Swine Production	2 s.h.

Agricultural Sales & Service

Agricultural Technology Division

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 Kevin Muhlenbruch, 641-422-4291, muhlekev@niacc.edu

The Sales and Service curriculum is designed to prepare students to work in the agricultural supply and service industry. It provides a sound academic foundation with emphasis on sales/merchandising, economics, business management, information management, precision agriculture, agronomy, animal science, human relations, and general education. Two eight-week internship experiences are required. Upon successful completion, graduates will receive an Associate in Applied Science Degree.

NIACC's Ag Advantage: *Champions of Agriculture--Providing high quality, vigorous education opportunities to students.*

- * Innovative Curriculum
- * Industry Partnerships
- * Rewarding Internships
- * Hands-On Labs
- * Highly Regarded by Transfer Institutions
- * Technology Emphasis
- * Award-Winning Faculty
- * Electronic Classrooms
- * Satisfied Graduates

Transfer Opportunities: All classes required in our curriculum can be transferred to Iowa State University and/or Northwest Missouri State. Graduates can transfer to ISU as a junior and work toward a bachelor's degree in the College of Agriculture. Staff can advise you as to the best academic path for transfer.



NIACC Farm Lab: The NIACC Farm Lab consists of 260 no-till acres, 110 acres of pasture, livestock facilities for the swine and beef breeding herds, and provides Ag students with "hands-on" learning experiences in the areas of crop protection and management, precision farming technology, crop and livestock management, show pig and club calf production.

Career Opportunities

Internships: Students in Sales & Service complete two paid, eight-week internships. During your internships you will apply your academic skills in an actual work environment. The industry contacts made often lead to full-time employment following graduation.

Employment Opportunities: Jobs for Agriculture Sales & Service graduates include salespersons, counter sales, GPS/GIS service, production assistants, department managers, marketing, insurance, conservation and agency services, and business assistants and managers.

Earning Potential: Entry-level salaries for recent NIACC agriculture technology graduates ranged between \$ 20,000 and \$ 50,000 annually.

Required Courses/Suggested Schedule

First Year

First Term

AGA-154	Fundamentals of Soil Science	3 s.h.
AGS-109	Animal Science I	3 s.h.
AGS-110	Animal Science I Lab	1 s.h.
BUS-161	Human Relations.....	3 s.h.
ENG-102	Composition & Speech I	4 s.h.
MAT-770	Applied Math	2 s.h.
MAT-771	Applied Math II	2 s.h.
		18 s.h.

Second Term

AGA-114	Principles of Agronomy	3 s.h.
AGB-101	Agricultural Economics.....	3 s.h.
ACC-111	Introduction to Accounting.....	3 s.h.
AGS-209	Animal Science II	3 s.h.
AGS-210	Animal Science II Lab	1 s.h.
BIO-196	Intro to Bio-Technology	4 s.h.
		17 s.h.

Third Term

AGA-852	Principles of Crop Production	3 s.h.
AGP-331	Precision Agriculture	2 s.h.
AGS-811	Animal Technologies	1 s.h.
		6 s.h.

Second Year

Fourth Term

AGB-436	Grain Merchandising	2 s.h.
SDV-210	Cooperative Education Internship.....	4 s.h.
	Approved Ag Elective(s).....	8 s.h.
		14 s.h.

Fifth Term

AGB-338	Salesmanship & Advertising	2 s.h.
AGB-465	Ag Finance Management.....	2 s.h.
SDV-210	Cooperative Education Internship.....	4 s.h.
	Approved Ag Elective(s).....	8 s.h.
		16 s.h.

Total Program Hours **71 s.h.**

Recommended Agriculture Electives

AGA-854	Crop Production Lab	1 s.h.
AGA-855	Site Specific Crop Management	2 s.h.
AGA-860	Soils and Crop Management	2 s.h.
AGB-213	Ag Real Estate Evaluation	2 s.h.
AGB-338	Salesmanship & Advertising	2 s.h.
AGB-438	Ag Futures & Future Options	2 s.h.
AGS-227	Beef Cattle Production	2 s.h.
AGS-309	Livestock Production Lab I.....	1-2 s.h.
AGS-310	Livestock Production Lab II.....	1-2 s.h.
AGS-317	Animal Nutrition.....	2 s.h.
AGS-506	Swine Production	2 s.h.

Agricultural Marketing and Finance

Agricultural Technology Division

Joshua Byrnes, Agriculture and Industrial Division Chair, 641-422-4202, byrnejos@niacc.edu
Kevin Muhlenbruch, 641-422-4291, muhlekev@niacc.edu

The Marketing and Finance curriculum is designed to prepare students to work in the agricultural service industry. It provides a sound academic foundation with emphasis on business management, economics, information management, sales and marketing, precision agriculture, farm production, human relations, communication, and general education. An eight-week internship experience is required. **Upon successful completion, graduates will receive an Associate in Applied Science Degree.**

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- * Innovative Curriculum
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- * Rewarding Internships
- * Hands-On Labs
- * Highly Regarded by Transfer Institutions
- * Technology Emphasis
- * Award-Winning Faculty
- * Electronic Classrooms
- * Satisfied Graduates

Transfer Opportunities: All classes required in our curriculum can be transferred to Iowa State University and/or Northwest Missouri State. Graduates can transfer to ISU as a junior and work toward a bachelor's degree in the College of Agriculture. Staff can advise you as to the best academic path for transfer.

NIACC Farm Lab: The NIACC Farm Lab consists of 260 no-till acres, 110 acres of pasture, livestock facilities for the swine and beef breeding herds, and provides Ag students with "hands-on" learning experiences in the areas of crop protection and management, precision farming technology, crop and livestock management, show pig and club calf production, and business planning and decision making.

Career Opportunities

Internships: Students in Marketing and Finance complete one paid, eight-week internship. During your internship you will apply your academic skills in an actual work environment. The industry contacts made often lead to full-time employment following graduation.

Employment Opportunities: Jobs for Agricultural Marketing & Finance graduates include salespersons, accountants, GPS/GIS service, commodity marketing, department managers, production marketing, insurance, conservation, and government agency services, and business assistants and managers.

Earning Potential: Entry-level salaries for recent NIACC agriculture technology graduates ranged between \$20,000 and \$50,000 annually.

Required Courses/Suggested Schedule

First Year

First Term

AGA-154	Fundamentals of Soil Science	3 s.h.
AGS-109	Animal Science I	3 s.h.
AGS-110	Animal Science I Lab	1 s.h.
BUS-161	Human Relations.....	3 s.h.
ENG-102	Composition & Speech I	4 s.h.
	Math Elective.....	4 s.h.
		18 s.h.

Second Term

ACC-121	Principles of Accounting I.....	3 s.h.
AGA-114	Principles of Agronomy	3 s.h.
AGS-209	Animal Science II	3 s.h.
AGS-210	Animal Science II Lab	1 s.h.
ECN-120	Principles of Macroeconomics	3 s.h.
ENG-103	Composition & Speech II	4 s.h.
		17 s.h.

Third Term

AGA-852	Principles of Crop Production	3 s.h.
AGP-331	Precision Agriculture	2 s.h.
AGS-811	Animal Technologies	1 s.h.
		6 s.h.

Second Year

Fourth Term

ACC-122	Principles of Accounting II.....	3 s.h.
AGB-436	Grain Merchandising.....	2 s.h.
BUS-185	Business Law I.....	3 s.h.
ECN-130	Principles of Microeconomics	3 s.h.
	Approved Ag Elective(s).....	4 s.h.
		15 s.h.

Fifth Term

AGB-338	Salesmanship & Advertising	2 s.h.
AGB-438	Ag Futures & Future Options	2 s.h.
AGB-465	Ag Finance Management.....	2 s.h.
SDV-210	Cooperative Education Internship.....	4 s.h.
	Approved Ag Elective(s).....	6 s.h.
		16 s.h.

Total Program Hours

72 s.h.

Recommended Agriculture Electives

AGA-854	Crop Production Lab	1 s.h.
AGA-855	Site Specific Crop Management	2 s.h.
AGA-860	Soils and Crop Management	2 s.h.
AGB-205	Introduction to Farm Operation.....	2 s.h.
AGB-213	Ag Real Estate Evaluation	2 s.h.
AGB-438	Ag Futures & Futures Options	2 s.h.
AGE-116	Horse Essentials & Equine Management	2 s.h.
AGM-120	Basic Agricultural Mechanics	2 s.h.
AGS-227	Beef Cattle Production	2 s.h.
AGS-309	Livestock Production Lab I.....	1-2 s.h.
AGS-310	Livestock Production Lab II.....	1-2 s.h.
AGS-317	Animal Nutrition.....	2 s.h.
AGS-506	Swine Production	2 s.h.

E-Agribusiness

Agricultural Technology Division

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 Kevin Muhlenbruch, 641-422-4291, muhlekev@niacc.edu



The E-Agribusiness curriculum is designed to prepare students to utilize e-commerce technology to conduct business. It provides a sound academic foundation with emphasis on agriculture, business management, information technology, computer applications, internet function communications, and entrepreneurship. One eight-week internship experience is required. **Upon successful completion, graduates will receive an Associate in Applied Science Degree.**

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- * Highly Regarded by Transfer Institutions
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- * Award-Winning Faculty
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- * Satisfied Graduates

NIACC Farm Lab: The NIACC Farm Lab consists of 260 no-till acres, 110 acres of pasture, livestock facilities for the swine and beef breeding herds, and provides Ag students with "hands-on" learning experiences in the areas of crop protection and management, precision farming technology, crop and livestock management, show pig and club calf production, and business planning and decision making.

Career Opportunities

Internships: Students in E-Agribusiness complete one paid, eight-week internship. During your internship you will apply your academic skills in an actual work environment. The industry contacts made often lead to full-time employment following graduation.

Employment Opportunities: Jobs for E-Agribusiness graduates include sales and marketing, accounting, GPS/GIS service, and business opportunities utilizing web applications and development, web graphic design, e-commerce, computer networking, and computer systems support.

Earning Potential: Entry-level salaries for recent NIACC agriculture technology graduates ranged between \$ 20,000 and \$ 50,000 annually.

Required Courses/Suggested Schedule

First Year

First Term (Fall Semester)

BCA-101	Introduction to Computers and Information Systems...	3 s.h.
BUS-102	Introduction to Business.....	3 s.h.
CIS-125	Intro to Programming Logic with Language.....	3 s.h.
CIS-210	Web Development I.....	3 s.h.
ENG-102	Composition & Speech I.....	4 s.h.
		16 s.h.

Second Term (Spring Semester)

AGA-114	Principles of Agronomy.....	3 s.h.
BUS-151	Intro to E-Commerce.....	3 s.h.
GRA-108	Visual Communication.....	3 s.h.
	Approved General Education Core.....	3 s.h.
	Approved Free Elective(s).....	3 s.h.
		15 s.h.

Third Term (Summer)

AGA-852	Principles of Crop Production.....	3 s.h.
AGP-331	Precision Agriculture.....	2 s.h.
AGS-811	Animal Technologies.....	1 s.h.
		6 s.h.

Second Year

Fourth Term (Fall Semester)

NET-213	CISCO Networking.....	4 s.h.
	General Education Core.....	3 s.h.
	Approved Ag Elective(s).....	3 s.h.
	Approved Career Elective(s).....	4 s.h.
	Approved Free Elective(s).....	3 s.h.
		17 s.h.

Fifth Term (Spring Semester)

BUS-159	Internet Law, Copyright, and Computer Ethics.....	1 s.h.
CIS-232	Web Development II.....	1 s.h.
SDV-210	Cooperative Education Internship.....	4 s.h.
	Approved Ag Elective(s).....	6 s.h.
		12 s.h.

Total Program Hours **66 s.h.**

Students have considerable flexibility to select courses which will structure the program to meet their personal career goals. A list of corequisites and prerequisites has been prepared to allow students to determine the sequence of courses to complete the program. An approved list of elective courses is available.