

# AGRICULTURAL



Agricultural education prepares students for successful careers and a lifetime of informed choices in the global agriculture, food, fiber, and natural resource systems. Through agricultural education, students are provided opportunities for leadership development, personal growth, and career success.



## Are you interested in Agricultural Education?

### Consider starting with Agricultural Education Elective Options:

- Introduction to Agriculture • Agriscience Technology I • Foundations of Agriculture
- Agriscience Technology II • Agriculture III • Agriscience Technology III • Agriculture IV • CASE – Intro to AFNR

## Agriculture, Food & Natural Resources Career Cluster

The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products or resources.

Agribusiness Systems Pathway	Power, Structural & Technical Systems Pathway	Natural Resources Pathway	Environmental Services Systems Pathway
<p>The coordination of activities that contribute to the marketing, financing and development of agriculture. It is a high-tech industry using innovation to increase efficiency and profitability.</p> <ul style="list-style-type: none"> <li>• Ag Commodity Sales Agents</li> <li>• Farm Product Buyers and Purchasing Agents</li> <li>• Financial Managers, Branch or Department</li> <li>• Agricultural Sales Representatives</li> <li>• Ag Loan Officer</li> </ul>	<p>The focus is on the knowledge of engineering, hydraulics, pneumatics, electronics, power, structures and controls. Workers design agricultural structures as well as machinery and equipment.</p> <ul style="list-style-type: none"> <li>• Agricultural Engineers</li> <li>• Agricultural Equipment Operators</li> <li>• Farm Equipment Mechanics and Service Technicians</li> <li>• Parts Managers</li> <li>• Precision Ag/GPS Specialist</li> </ul>	<p>Systems people working in this pathway develop, maintain, manage and protect the natural environment. This includes forest and rangelands, minerals, water and wildlife habitats.</p> <ul style="list-style-type: none"> <li>• Fish and Game Wardens</li> <li>• Forest and Conservation Workers</li> <li>• Geological Data Technicians</li> <li>• Soil and Water Conservationists</li> </ul>	<p>Water and air pollution control, recycling, waste disposal and public health issues are concerns. Workers analyze scientific data, research environmental projects and develop quality control procedures.</p> <ul style="list-style-type: none"> <li>• Environmental Compliance Inspectors</li> <li>• Environmental Engineering Technicians</li> <li>• Pest Control Workers</li> <li>• Water and Wastewater Treatment Plant and Systems Operators</li> </ul>
Career Pathway Classes	Career Pathway Classes	Career Pathway Classes	Career Pathway Classes
<ul style="list-style-type: none"> <li>• Agricultural Sales &amp; Service</li> <li>• Agricultural Business Management</li> <li>• World Agricultural Science and Technology</li> <li>• Community Development</li> <li>• Supervised Agricultural Experience</li> <li>• Cooperative Work Experience</li> <li>• Individual Agricultural Studies</li> </ul>	<ul style="list-style-type: none"> <li>• Agricultural Mechanics Technology I</li> <li>• Agricultural Mechanics Technology II</li> <li>• Agricultural Mechanics Power Systems</li> <li>• Agricultural Welding &amp; Fabrication</li> <li>• Advanced Ag Welding &amp; Fabrication</li> <li>• Individual Agricultural Studies</li> <li>• Supervised Agricultural Experience</li> <li>• Cooperative Work Experience</li> </ul>	<ul style="list-style-type: none"> <li>• Botany/Horticulture Science I</li> <li>• Botany/Horticulture Science II</li> <li>• Natural/Environmental Resources</li> <li>• World Agriculture Science and Technology</li> <li>• Individual Agricultural Studies</li> <li>• Community Development</li> <li>• Supervised Agricultural Experience</li> <li>• Cooperative Work Experience</li> </ul>	<ul style="list-style-type: none"> <li>• Botany/Horticulture Science</li> <li>• Agricultural Mechanics Technology</li> <li>• Natural/Environmental Resources</li> <li>• World Agricultural Science and Technology</li> <li>• CASE Environmental Issues</li> <li>• Individual Agricultural Studies</li> </ul>

# EDUCATION

Agricultural education instruction is delivered through three major components:

1. Classroom/laboratory instruction (contextual learning)
2. Supervised Agricultural Experience (SAE) programs (work-based learning)
3. Student leadership organizations (National FFA Organization, and National Professional Agricultural Student Organization, National Young Farmer Educational Association).

## Agriculture, Food & Natural Resources Career Cluster

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Food Products & Processing Systems Pathway	Plant Systems Pathway	Animal Systems Pathway
<p>The discovery of new food sources and the processing, packaging and food storage based on industry and government regulations.</p> <ul style="list-style-type: none"> <li>• Agricultural and Food Science Technicians</li> <li>• Agricultural Scientists</li> <li>• Food Scientists and Technologists</li> <li>• Agricultural Products Graders and Sorters</li> <li>• Meat Scientist</li> </ul>	<p>Helping producers of crops feed a growing population while conserving natural resources and maintaining the environment.</p> <ul style="list-style-type: none"> <li>• Crop, Nursery and Greenhouse Farmworkers</li> <li>• Foresters</li> <li>• Lawn Service Managers</li> <li>• Soil and Plant Scientists</li> <li>• Agronomist</li> <li>• Custom Applicator</li> <li>• Agronomy Sales/Manager</li> </ul>	<p>People in this pathway develop more efficient ways of producing and processing meat, poultry, eggs and dairy products. They study genetics, nutrition, reproduction, and the development of farm animals.</p> <ul style="list-style-type: none"> <li>• Animal Scientists</li> <li>• Supervisors of Animal Care Workers</li> <li>• Veterinarians</li> <li>• Zoologists and Wildlife Biologists</li> <li>• Meat Cutter</li> <li>• Animal Nutritionist</li> </ul>
Career Pathway Classes	Career Pathway Classes	Career Pathway Classes
<ul style="list-style-type: none"> <li>• Agriculture Processing</li> <li>• Individual Agricultural Studies</li> <li>• Supervised Agricultural Experience</li> <li>• Cooperative Work Experience</li> </ul>	<ul style="list-style-type: none"> <li>• CASE – Principles of Agricultural Science-Plant</li> <li>• Agronomy Science</li> <li>• Botany/Horticulture Science I</li> <li>• Botany/Horticulture Science II</li> <li>• World Agriculture Science and Technology</li> <li>• Individual Agricultural Studies</li> <li>• Supervised Agricultural Experience</li> <li>• Cooperative Work Experience</li> </ul>	<ul style="list-style-type: none"> <li>• CASE – Principles of Agricultural Science-Animal</li> <li>• Livestock Production</li> <li>• Equine Science</li> <li>• Small Animal Care</li> <li>• Veterinary Science</li> <li>• Agriculture Processing</li> <li>• World Agriculture Science and Technology</li> <li>• Individual Agricultural Studies</li> <li>• Supervised Agricultural Experience</li> <li>• Cooperative Work Experience</li> </ul>

Find more at [RUReady.ND.gov](http://RUReady.ND.gov) and [Insights.ND.gov/College](http://Insights.ND.gov/College)