

**Courses**

**CAREER/TECHNICAL**



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/resources.

All intermediate courses have a prerequisite of one fundamental course in the same sub-cluster. All advanced courses have a prerequisite of one fundamental and one intermediate course in the same sub-cluster.

All CTE courses can be taken for Honors credit. In order for a student to receive Honors credit for these courses they will have to complete at least an additional five elements for the course

**Pathway: Animal Systems – Pre-Veterinary**

**Agriscience**

**Credit: 1**

**SDE Course Code: 5121 or 5171**

**MNPS Course Code: AGR8776 or SCI6616**

Agriscience consists of standards to prepare students for biology and subsequent sciences for the university bound student. The content area covers ecology, biological processes, sexual and asexual reproduction and a study of the chemical and physical laws that govern life. This course helps students understand the important role science serves as the agricultural industry moves into the 21st century.

**Small Animal Care**

**Credit: ½ - 1**

**SDE Course Code: 5122**

**MNPS Course Code: AGR8375**

Small Animal Care contains objectives to prepare students for careers in managing and caring for specialty and pet animals. As our population raises more specialty animals and pets for production purposes and personal value, careers that work with these animals in a safe environment will continue to expand

**Horse Science**

**Credit: ½ - 1**

**SDE Course Code: 5118**

**MNPS Course Code: AGR5118**

Horse science is designed to develop basic understanding of equine handling, health, maintenance, reproduction, selection and management. Horse populations in the state have continued to grow and their economic impact has increased with this growth. This

course is designed to help students prepare for the social and economic impact equine science will have in the 21st century.

**Principles of Veterinary Science**

**Credit: 1**

**SDE Course Code: 5126**

**MNPS Course Code: AGR8374**

Principles of Veterinary Science challenges students to use advanced technologies and medical treatments to maintain the health of animals. The animal health industry continues to grow in importance and prominence as more people purchase animals for pleasure and sustenance. This course addresses standard principles of veterinarian medicine and includes new methods of treatment that will be used as we move into the 21<sup>st</sup> century.

**Pathway: Animal Systems – Production Animals**

**Agriscience**

**Credit: 1**

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**MNPS Course Code: AGR8776 or SCI6616**

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physical laws that govern life. This course helps students understand the important role science serves as the agricultural industry moves into the 21st century.

**Advanced Principles of Agriculture**

**Credit:** ½ - 1  
**SDE Course Code:** 5105  
**MNPS Course Code:** AGR5105

Advanced Principles of Agriculture includes standards that challenge students to plan for one of the five career clusters in agriculture. Understanding the skills necessary to be successful in an agriculture career is important for students as they enter the agricultural industry in the 21st century.

**Livestock Management**

**Credit:** ½ - 1  
**SDE Course Code:** 5127or 5177  
**MNPS Course Code:** AGR5177 or SCI5127

Livestock Management will help prepare students for further courses of study in animal science. The effective management of livestock requires an applicable knowledge of animal anatomy, nutrition, health genetics, facilities and the effects of livestock production on the environment. This course further prepares students to apply these principles.

**Principles of Veterinary Science**

**Credit:** 1  
**SDE Course Code:** 5126  
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Principles of Veterinary Science challenges students to use advanced technologies and medical treatments to maintain the health of animals. The animal health industry continues to grow in importance and prominence as more people purchase animals for pleasure and sustenance. This course addresses standard principles of veterinarian medicine and includes new methods of treatment that will be used as we move into the 21<sup>st</sup> century.

**Pathway: Power, Structures and Technical Systems**

**Agriscience**

**Credit:** 1  
**SDE Course Code:** 5121 or 5171  
**MNPS Course Code:** AGR8776 or SCI6616

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**Agriculture Mechanics and Maintenance.**

**Credit:** ½ - 1  
**SDE Course Code:** 5101  
**MNPS Course Code:** AGR5101

Agricultural Mechanics includes standards to prepare students for operational procedures for a shop or a home environment. Students learn basic skills in areas ranging from welding and electricity to land measuring to plumbing. As students enter the 21st century, they need to have skills that can be used in a rural or an urban environment

**Agriculture Power and Equipment**

**Credit:** 1 or 2  
**SDE Course Code:** 5102  
**MNPS Course Code:** AGR8276

Agricultural Power and Equipment includes basic information and laboratory activities on small engines, tractors and agricultural equipment maintenance, repair and overhaul. The standards address competencies for electrical motors, hydraulic systems and fuel powered engines

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**Principles of Agriculture Engineering**

**Credit:** 1 or 2  
**SDE Course Code:** 5128  
**MNPS Course Code:** AGR8130

Principles of Agricultural Engineering includes standards on metal fabrication and agriculture structures. Subject matter will include hot/cold metal work, cost and material computation, electric wiring and codes, engine service and repair, blueprint reading and drawing and selection of appropriate materials for projects.

**Pathway: Agribusiness, Food Products and Process Systems**

**Agriscience**

**Credit:** 1  
**SDE Course Code:** 5121 or 5171  
**MNPS Course Code:** AGR8776 or SCI6616

Agriscience consists of standards to prepare students for biology and subsequent sciences for the university bound student. The content area

covers ecology, biological processes, sexual and asexual reproduction and a study of the chemical and physical laws that govern life. This course helps students understand the important role science serves as the agricultural industry moves into the 21st century.

**Leadership**

**Credit:** ½ - 1  
**SDE Course Code:** 5119  
**MNPS Course Code:** AGR5119

Leadership analyzes attributes and capabilities of those in leadership positions, to assist students in the development of their interpersonal relationships and other related skills.

Most jobs are lost or gained because of the leadership ability a person has. As we enter the 21st century and a global market place, these skills will become more important as an asset for career success.

**Agriculture Sales and Service**  
**Credit: 1 or 2**  
**SDE Course Code: 5103**  
**MNPS Course Code: AGR8276**

Agricultural Sales and Service prepares students to enter a customer service related career in agriculture.

These standards assist students in developing needed skills for developing positive customer relations, meeting profitable sales goals and applying business ethics while giving students the opportunity to see how business will be conducted as we move into the 21st century.

**Agriculture Business/Economics**  
**Credit: 1**  
**SDE Course Code: 5100**  
**MNPS Course Code: AGR5100**

Agricultural Business/Economics contains standards that address the economic principles necessary for a successful business. As technology improves the ability to communicate, philosophies on marketing and production must change in order for industries to remain competitive.

**Pathway: Environmental and Natural Resources Systems**

**Agriscience**  
**Credit: 1**  
**SDE Course Code: 5121 or 5171**  
**MNPS Course Code: AGR8776 or SCI6616**

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**Forestry**  
**Credit: 1/2 - 1**  
**SDE Course Code: 5115**  
**MNPS Course Code: AGR8977**

Forestry is designed to develop student knowledge of forestry technology as it progresses into the 21st century. The student will develop skills in producing, harvesting, marketing, and developing forestry products. Forests are one of the state's most valuable resources. If we are to enjoy their products in the future, they must be conserved today.

**Soil and Land Management**  
**Credit: 1/2 - 1**  
**SDE Course Code: 5112**  
**MNPS Course Code: AGR8110**

Soil and landscape management addresses the concerns dealing with soil conservation and appropriate use. As the urban expansion consumes tillable acres, the need for improved soil management becomes

critical. The standards of this course prepare students to demonstrate practices for wise land use in the 21st century.

**Crop Science**  
**Credit: 1 or 2**  
**SDE Course Code: 5111**  
**MNPS Course Code: AGR5111**

Crop Science is designed to challenge students interested in the fundamentals of soil use, land management, environmental conservation and the efficient production of various field crops, fruits, berries, and vegetables. The 21st century will see the need for improved management of these natural resources and an increased production of the food commodities produced on our limited amount of soil.

**Pathway: Plant Systems- Turf grass/Nursery Productions**

**Agriscience**  
**Credit: 1**  
**SDE Course Code: 5121 or 5171**  
**MNPS Course Code: AGR8776 or SCI6616**

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**Turfgrass Management**  
**Credit: 1/2 - 1**  
**SDE Course Code: 5123**  
**MNPS Course Code: AGR8677**

Turfgrass is the most widely used ornamental crop in this country and is a multibillion dollar- a-year business. This course will cover the history of turfgrass in this country and the management techniques utilized today in various turfgrass

applications. Students will apply these techniques as they prepare for a career in turfgrass management

**Nursery Production**  
**Credit: 1/2 - 1**  
**SDE Course Code: 5120**  
**MNPS Course Code: AGR8674**

Nursery production includes standards that challenge students to plan for needs in the production of ornamental products. As the urban society continues to expand to other

regions, nursery production is important to provide aesthetic landscaping for various cultures and desires.

**Horticulture Technology**  
**Credit: 1**  
**SDE Course Code: 5125**  
**MNPS Course Code: AGR8120**

Horticulture Technologies includes standards that challenge students to plan for future food needs, using advanced technologies. These tech-

nologies are becoming increasingly important as populations grow and farm land is consumed by this urban growth. Understanding the benefits of these technologies and how to blend their use with environmental conservation is important as we enter the 21st century.

**Pathway: Plant Systems: Horticulture Production**

**Agriscience**  
**Credit: 1**  
**SDE Course Code: 5121/5171**  
**MNPS Course Code: AGR8776 or SCI6616**

Agriscience consists of standards to prepare students for biology and subsequent sciences for the university bound student. The content area covers ecology, biological processes, sexual and asexual reproduction and a study of the chemical and physical laws that govern life. This course helps students understand the important role science serves as the agricultural industry moves into the 21st century.

**Exterior/ Interior Landscaping**  
**Credit: ½ - 1**  
**SDE Course Code: 5113**  
**MNPS Course Code: AGR8673**

Exterior/Interior Landscaping includes standards to prepare students for creating aesthetic environments for homes and industries. As the population expands and economies grow, the demand for planned and creative exterior and interior landscapes increases. The desire for appropriate landscape materials and designs will grow in the 21<sup>st</sup> century.

**Hydroponics**  
**Credit: ½ - 1**  
**SDE Course Code: 5129**  
**MNPS Course Code: AGR8140**

Hydroponics includes standards that challenge students to plan for future food needs using advanced technologies and less space. Soilless media are becoming increasingly important as populations grow and farmland is consumed by urban growth. Understanding how the benefits of hydroponics blend with environmental conservation is important as we enter the 21st century

**Horticulture Technology**  
**Credit: 1**  
**SDE Course Code: 5125**  
**MNPS Course Code: AGR8120**

Horticulture Technologies includes standards that challenge students to plan for future food needs, using advanced technologies. These technologies are becoming increasingly important as populations grow and farm land is consumed by this urban growth. Understanding the benefits of these technologies and how to blend their use with environmental conservation is important as we enter the 21st century.