



# **Course Offerings**

**2021-2022**

[www.northvalleyctc.org](http://www.northvalleyctc.org)  
<http://www.northvalley.k12.nd.us>

The North Valley Area Career and Technology Center is a regional facility committed to excellence in education, providing diverse populations with learning opportunities that reflect the changing needs of the community and workplace.

## Automotive Technology

### Auto Technology (17037)

Grade Level 10-12

Credits: 2 per year

Instructor: Randy Kennedy

Prerequisites: None

Over a two-year period Auto Tech covers safety and tools, engine service, suspension and steering, brakes, drive train, HVAC, electrical and engine performance. Auto technology students may participate in the student organization SkillsUSA.

**TRANSPORTATION, DISTRIBUTION, AND LOGISTICS CAREER CLUSTER – Facility & Mobile Equipment Maintenance**

### Introduction to Auto Technology (17032)

Classroom or ONLINE

Grade Level 10-12

Credits: 1 per year

Instructor: Randy Kennedy

Prerequisites: None

This is a one hour introductory course in Auto Technology. The Auto Maintenance and Light Repair Technology program begins with an orientation to the eight areas of NATEF standardized programming; Suspension and Steering, Brakes, Electrical/Electronic Systems, Heating and Air Conditioning and Engine Performance. This course will also explore the various careers in the Automotive industry. Auto Technology is a sequential course and this course is a suggested prerequisite to Automotive Technology.

**TRANSPORTATION, DISTRIBUTION, AND LOGISTICS CAREER CLUSTER – Facility & Mobile Equipment Maintenance**

### Commercial Drivers License (CDL) (17045)

Classroom or ONLINE

Grade Level 12

Credits: 1 per year

Instructor: Bryan Stastny

Prerequisite: None

The focus of this class is to give the students an understanding of what is needed to obtain the CDL certification. You will start with the basics and move up to the finer points of the trade. Topics include required CDL Manual subjects such as General Knowledge, Air Brakes, and Combination Vehicle, as well as Tanker, Doubles/Triples, and Hazmat endorsements. Also covered are hours of service, weight and balance, vehicle out-of-service regulations, and National Safety Council professional truck driver DDC. At the end of the year students should have the skills needed to obtain a CDL permit and begin to work on the skills needed to pass the CDL drivers test. Students need to be 18 to obtain the CDL permit and to earn the CDL license.

**TRANSPORTATION, DISTRIBUTION, AND LOGISTICS CAREER CLUSTER – Transportation Operations**

### Auto Cooperative Work Experience (17999)

By Arrangement

Grade Level: 11-12

Credits: 1 or 2 per year

Instructor: Randy Kennedy

Prerequisites: Must have completed at least 2 Auto Credits

This class involves working both inside and outside of the classroom. The outside classroom duties may be done for an area employer. The work may be paid or volunteer, depending on the work agreement. Cooperative Work Experience needs to be approved by Instructor & Center Director.

**TRANSPORTATION, DISTRIBUTION, AND LOGISTICS CAREER CLUSTER – ALL**

*All Auto Technology students may participate in the student organization SKILLS USA!*

## **Construction Technology**

### **Construction Technology (One Hour) (17100)**

Grade Level 10-12

Credits: 1 per year

Instructor: Brian Bork

Prerequisites: None

Learn about the construction industry. Students learn the basics of concrete, floor framing, wall framing, rafter and roof framing, shingling, and exterior finishing by completing construction projects. Construction technology students may participate in the student organization SkillsUSA.

**ARTITECTURE & CONSTRUCTION CAREER CLUSTER – Construction**

### **Construction Technology (Two hour) (17117)**

Grade Level 11-12

Credits: 2 per year

Instructor: Brian Bork

Prerequisites: None

Students learn about various building materials, use and care of tools, and foundation, floor, wall, and roof construction while working on construction projects. Students are introduced to concrete, plumbing, and electrical installation, interior wall finishing, insulating, stair construction, and window and door installation. Construction technology students may participate in the student organization SkillsUSA.

**ARTITECTURE & CONSTRUCTION CAREER CLUSTER – Construction**

### **Drafting for Construction (17130)**

**Classroom or ONLINE**

Grade Level 10-12

Credits: 1 per year

Instructor: Brian Bork

Prerequisites: None

This is a two-part course. The first semester involves the fundamental concepts of drafting. Emphasis will be placed on mechanical and architectural drafting. The second semester is devoted to Computer-Aided Drafting and Design. The CADD system takes the student through commands from as simple as drawing a line to as complex as 3-dimensional geometric forms. Drafting students may participate in the student organization SkillsUSA.

**ARTITECTURE & CONSTRUCTION CAREER CLUSTER – Design/Pre-Construction**

### **Advanced Drafting for Construction (17131)**

**Classroom or ONLINE**

Grade Level 11-12

Credits: 1 per year

Instructor: Brian Bork

Prerequisites: Drafting I

Learn advanced drafting techniques including 3-D drawing using AutoCAD. Students will work on specialized projects. Drafting students may participate in the student organization SkillsUSA.

**ARTITECTURE & CONSTRUCTION CAREER CLUSTER – Design/Pre-Construction**

### **Construction Cooperative Work Experience (17999)**

**By Arrangement**

Grade Level 11-12

Credits: 1 per year

Instructor: Brian Bork

Prerequisites: Must have completed at least 2 Construction Credits

This class involves working both inside and outside of the classroom. The outside classroom duties may be done for an area employer. The work may be paid or volunteer, depending on the work agreement. Cooperative Work Experience needs to be approved by Instructor & Center Director.

**CAREER CLUSTER – ALL**

***All Construction Technology students may participate in the student organization SKILLS USA!***

## **Health Science**

### **Health Science 1 (07033)**

Grade Level 10-12

Credits: 1 per year

Instructor: Valerie Heuchert BSN

Prerequisites: None

Periods offered 2, 4 and 6

This 1 credit section of Health Science continues to give students the core units of instruction which are related to many health careers. These units include: a. History and Trends of Health Care b. Health Care Systems c. Introduction to Medical Terminology d. Anatomy and Physiology (Basic Structure and Function of the Human Body, Body Planes, Directions, and Cavities, Integumentary System, Skeletal System, Muscular System, Nervous System, Circulatory System, Respiratory System), e. Human Growth and Development f. Computers and Technology in Health Care g. Infection Control h. Introduction to Medical Terminology (Focus is on ***human*** anatomy and disorders when anatomy is covered). Students may participate in the student organization HOSA. A student may take Health Science two consecutive years as the curriculum will rotate every other year.

**HEALTH SCIENCE CAREER CLUSTER – Therapeutic Services**

### **Medical Terminology/Advanced Patient Care (07036/07035)**

Grade Level 11-12

Credits: 1 per year

Instructor: Valerie Heuchert BSN

Prerequisites: None

Periods offered 0

The Medical Terminology section is the first semester of this class which is designed to introduce students to the health information technology field. Students will learn prefixes, suffixes and root words for medical terms. This will include meanings, spellings and pronunciations. Emphasis is on building a working medical vocabulary based on body systems. Anatomy and physiology of major organs, pathological conditions, laboratory studies, clinical procedures and abbreviations are studied for each body system. The student will also learn medical terminology as it relates to pathology, diagnostic, surgical, clinical and laboratory procedures, and common abbreviations and acronyms by body systems. This class can be taken for three college credits. College credits are obtained through Lake Region State College.

Advanced Patient Care is the second semester of this course that covers a variety of units related to the health care field. The units include: a. IV b. Medical Abbreviations c. Injection Unit d. Promotion of Safety e. Medical Math f. Reproductive System g. Nursing Annie Diagnoses and Care. Students may participate in the student organization HOSA.

**HEALTH SCIENCE CAREER CLUSTER – Therapeutic Services**

### **Basic Patient Care (07032)**

Grade Level: 10-12

Credits: 1 per year

Instructor: Valerie Heuchert BSN

Prerequisites: None

The Nursing Assistant Training program offers classroom instruction and clinical practice to those preparing for employment as a certified nurse assistant in a skilled nursing facility, acute care or home health care.

This course covers a variety of units related to the health care field. The units include:

a. Certified Nurse Assisting program b. Geriatric Care c. First Aid & CPR as needed d. Medical Abbreviations e. Promotion of Safety f. Medical Math

Students may choose to challenge the CNA test offered by the North Dakota Board of Nursing. CNA certification is a prerequisite for entry into college health science programs.

Students may be given the opportunity to take a First Aid and CPR class to become certified in these areas by taking the required test. Students may participate in the student organization HOSA.

**HEALTH SCIENCE CAREER CLUSTER – Therapeutic Services**

**Sports Medicine (07034)**

Grade Level: 10-12

Credits: 1 per year

Instructor: Valerie Heuchert BSN

Prerequisites: None

This course provides the student with a background in athletic training and basic health care. The course emphasizes injury prevention, first responder management daily for athletic injuries, and skills to fulfill the activities of daily living. Students will be able to complete the requirements to become a student athletic trainer.

**HEALTH SCIENCE CAREER CLUSTER – Therapeutic Services**

**Health Education Supervised Occupational Experience (07999)**

**By Arrangement**

Grade Level: 11-12

Credits: 1 per year

Instructor: Valerie Heuchert BSN

Prerequisites: Completed at least 2 Health Science credits

This class involves working both inside and outside the classroom. The outside classroom duties may be done for an area employer. The work may be paid or volunteer, depending on the work agreement. Cooperative Work Experience needs to be approved by Instructor & Center Director. Health Science students may participate in the student organization HOSA.

**HEALTH SCIENCE CAREER CLUSTER – Therapeutic Services**

***All Health Science students may participate in the student organization HOSA!***

## **Business Education**

### **Developing Leaders (14060)**

Grade Level 9-12

Credits: 1 per year

Instructor: Susan Shuley

Prerequisites: None

The focus of this class is to expose students to the methods of the communication process, time management, and presentation skills. Students will collaborate in small groups to research, compile, prepare, and present formal/informal documents and oral presentations. Leadership is about building character and enhancing soft skills, while working with others and that's what this class represents. As students progress through the year, they grow not only as a future leader in their chosen career choice but also build confidence in themselves and others. Guest speakers from different careers and leadership roles will share their stories and expertise with the class members. Creating a platform issue to benefit the community is an integral part of this class.

**BUSINESS MANAGEMENT & ADMINISTRATION CAREER CLUSTER – ALL**

### **Modern Business Technology (MBT) (14096/14025)**

Grade Level: 10-12

Credits: 1 per year

Instructor: Susan Shuley

Prerequisites: None

Students learn applications for word processing, electronic spreadsheet, and create a working calendar. Students will work individually and as part of team on a variety of assignments and projects. Students will build a portfolio and an electronic portfolio to showcase their skills along with creating a professional resume. In the last quarter of MBT, students will take part in a job interview to prepare them for the world of work. Modern Business Technology students may participate in the student organization FBLA.

**BUSINESS MANAGEMENT & ADMINISTRATION CAREER CLUSTER – Administrative Support**

### **Video Production (14028)**

Grade Level 10-12

Credits: 1 per year

Instructor: Joey Demers

Prerequisites: Multimedia

Video Editing is designed as a complete introductory course in digital media production and editing. This course is a project-based curriculum that develops key digital communication skills such as design, project management, research and communication, and video and audio design and production technical skills.

Students who enroll in this class will be partnered with students in Model Store to design, film, and edit local business commercials as a joint venture with the Strand Twin Theaters in Grafton, ND. Video Editing students may participate in the student organizations FBLA and DECA.

**BUSINESS MANAGEMENT & ADMINISTRATION CAREER CLUSTER – Administrative Support**

### **Financial Literacy (14081 & 14082)**

Grade Level 9-12

Credits: 1 per year

Instructor: Susan Shuley

Manage spending to meet financial goals and minimize the impact of financial obstacles. Learn how to control personal credit and debt. Explore how to boost personal earning capability. Put personal assets to work to build wealth. Understand how to use financial services in a sensible and cautious manner. Gain knowledge in protecting personal property, financial resources, and personal information.

**BUSINESS MANAGEMENT & ADMINISTRATION CAREER CLUSTER – Administrative Support**

**Accounting I/II (14010/14011)**

Grade Level 10-12

Credits: 1 per year

Instructor: Joey Demers

Prerequisites: None

**Accounting I:** Students will learn the fundamentals of Accounting principles that include: terminology, accounting cycle, basic concepts, financial statements, roles of accountants and ethics in accounting. A manual simulation packet is integrated in the course.

**Accounting II:** Students will continue learning the fundamental concepts of Accounting. Topics covered include terminology, accounting cycle, basic concepts, financial statements, roles of accountants and ethics in accounting. An automated simulation packet is integrated in the course. Accounting students may participate in the student organizations FBLA and DECA.

**FINANCE CAREER CLUSTER – Accounting**

**Accounting III/IV (14012/14013)**

Grade Level 11-12

Credits: 1 per year

Instructor: Joey Demers

Prerequisites: Accounting I, II

**Accounting III:** Students will acquire a more thorough, in-depth knowledge of accounting procedures and techniques utilized in solving business problems and making financial decisions. Students will develop skills in analyzing and interpreting financial information common to businesses. A contemporary automated business simulation set that lets the students put accounting skills into practice is included.

**Accounting IV:** Students will continue to develop skills in analyzing and interpreting information common to corporate forms of organization, preparing formal statements and supporting schedules, and using inventory and budgetary control systems. Higher level corporate, managerial and cost accounting concepts are presented in this course. A contemporary automated simulation set that lets the student put accounting skills into practice is included. Accounting students may participate in the student organizations FBLA and DECA.

**FINANCE CAREER CLUSTER – Accounting**

**Business Ed Cooperative Work Experience (14999)**

**By Arrangement**

Grade Level 11-12

Credits: 1 per year

Instructor: Susan Shuley

Prerequisites: Completed at least 2 Busn. Ed. Credits

This class involves working both inside and outside of the classroom. The outside classroom duties may be done for an area employer. The work may be paid or volunteer, depending on the work agreement. Cooperative Work Experience needs to be approved by Instructor & Center Director. Business Ed. students may participate in the student organizations FBLA and DECA.

**CAREER CLUSTER – ALL**

***All Business Education students may participate in the student organization FBLA!***

## Marketing Education

### Multimedia (04235) (1st Semester)

Grade Level 9-12

Credits: ½ per year

Instructor: Joey Demers

Prerequisites: None

Multimedia is designed to allow students to use digital images and videos to create meaningful documentation, production, and presentations. Images, logos, backgrounds, and navigation tools for digital display will be used in multimedia and Internet applications. The topics of image-editing, and planning for multimedia applications will also be discussed. Enhancements include proper format and appropriate use of graphics, animations, and transitions.

**MARKETING CAREER CLUSTER – ALL**

### Principles of Marketing (04080) (2nd Semester)

Grade Level 9-12

Credits: ½ per year

Instructor: Joey Demers

Prerequisites: None

Principles of Marketing is an introductory course that develops student understanding and skills in such areas as business law, communication skills, customer relations, economics, emotional intelligence, financial analysis, human resources management, information management, marketing, operations, professional development, and strategic management. Students acquire knowledge of fundamental business activities and factors affecting business, develop verbal and written communication skills, use information literacy skills, utilize job-seeking strategies, and participate in career planning.

**MARKETING CAREER CLUSTER – ALL**

### Sports and Entertainment Marketing (04240)

Classroom or ONLINE

Grade Level 10-12

Credits: 1 per year

Instructor: Joey Demers

Prerequisites: None

To prepare students for marketing occupations in the area of sports and entertainment. Take a look at the exciting and dynamic field of sports and entertainment marketing. One of the largest industries in the world, sports marketing provides a unique way of looking at the business world. This course will focus on the two main aspects of sports and entertainment marketing: 1) The marketing of sports and entertainment, and 2) The marketing of non-sports products and services through sports. You will discover why companies pay to be associated with a team or entertainer; how to develop ticket plans to fill the seats in the arena; why targeting your marketing efforts is so important; and more. Sports and Entertainment Marketing students may participate in the student organizations FBLA and DECA.

**MARKETING CAREER CLUSTER – Professional Sales/Merchandising/Marketing Communication**

### Entrepreneurship (04111 or 14111)

Classroom or ONLINE

Grade Level 10-12

Credits: 1 per year

Instructor: Joey Demers

Prerequisites: None

To provide opportunity for students to explore self-employment benefits versus risks and to develop specific competence in starting a small business. It covers the characteristics of an entrepreneur, economics and the nature of small business, feasibility study Business Plan Development, type of ownership, location, financing, recordkeeping, management, promotion, legal issues, business protection, and assistance. Entrepreneurship students may participate in the student organizations FBLA and DECA.

**MARKETING CAREER CLUSTER – Marketing Management**

**BUSINESS CAREER CLUSTER – General Management**

**Sports and Entertainment Marketing OR Entrepreneurship – DEPENDING ON REQUESTS**



**Marketing I (04210)**

**Classroom or ONLINE**

Grade Level 10-12

Credits: 1 per year

Instructor: Joey Demers

Prerequisites: None

This course is designed to develop students' understanding and skills in such areas as business law, communication skills, customer relations, economics, emotional intelligence, financial analysis, human resource management, information management, marketing operations, professional development, and strategic management. Students acquire knowledge of fundamental business activities and factors affecting business, develop verbal and written communication skills, use information literacy skills, utilize job-seeking strategies, and participate in career planning. Marketing I students may participate in the student organizations FBLA and DECA.

**MARKETING CAREER CLUSTER - ALL**

**Model Store (Marketing DECA Depot) (04290)**

Grade Level 11-12

Credits: 1 per year

Instructor: Joey Demers

Prerequisites: 1 Marketing or Busn Credit

This course is designed to prepare students for employment. The DECA Depot provides a model store complete with modern business equipment. Retail operation and marketing activities integrated with classroom learning, including involvement in real work situations, various store responsibilities and other relevant activities; participation in total store operations by student rotation through the store departments of management, merchandising, sales promotion, and controlling. Students who enroll in this class will also work as advertisement salespersons through a joint venture with the Strand Twin Theaters in Grafton, ND. They will sell advertising space to local businesses for commercials to be played before movies and have the video editing students design, film, and edit the final product. Model Store students may participate in the student organizations FBLA and DECA.

**MARKETING CAREER CLUSTER - ALL**

**Marketing Cooperative Work Experience (04999)**

**By Arrangement**

Grade Level: 11-12

Credits: Up to 2 per year

Instructor: Joey Demers

Prerequisites: Completed at least 2 Marketing Credits

This class involves working both inside and outside of the classroom. The outside classroom duties may be done for an area employer. The work may be paid or volunteer, depending on the work agreement. Cooperative Work Experience needs to be approved by Instructor & Center Director. Marketing Co-op students may participate in the student organizations FBLA and DECA.

**MARKETING CAREER CLUSTER - ALL**

***All Marketing students may participate in the student organization DECA!***

## Welding Technology

### Welding Technology (17236-1CR/17237-2CR)

Grade Level 10-12

Credits: 1 or 2 per year

Instructor: Bryan Stastny

Prerequisites: None

Students learn the various welding processes: Oxy-Fuel weld and cutting, Shielded metal arc weld (Stick), Gas metal arc weld and Flux core arc weld (wire feed), Gas tungsten arc weld (Tig), Plasma arc cutting, and Air arc gouging. General shop safety and theory of each weld process along with blueprint reading, weld symbols, weld joints and positions, and properties of metals are studied. Students completing required standards will be eligible to test for A.W.S. entry level weld certification. Welding students may participate in the student organization SkillsUSA.

**MANUFACTURING CAREER CLUSTER – Production**

### Emerging Technology (17113)

Grade Level 10-12

Credits: 1 per year

Instructor: Bryan Stastny

Prerequisites: None

An applied technology course studying our ever changing technology in today's society. A hands-on course designed to further students' knowledge in some of the more advanced, as well as practical technology fields. Students learn the application of peripheral computer hardware by learning basic programming procedures utilizing both a microprocessor and a microcomputer and various peripheral material handling devices. This is aided by the use of such equipment as a C/N/C lathe/mill to produce self-designed products. Students will also receive training in other CNC areas such as in the laser engraver, 3D printer, 3D Plastic Molding, and embroidery machine. Emerging Technology students may participate in the student organization SkillsUSA.

**MANUFACTURING CAREER CLUSTER – Production**

### Welding Cooperative Work Experience (17999)

### By Arrangement

Grade Level 11-12

Credits: Up to 2 Credits per year

Instructor: Bryan Stastny

Prerequisites: Completed at least 2 Welding Credits

This class involves working both inside and outside of the classroom. The outside classroom duties may be done for an area employer. The work may be paid or volunteer, depending on the work agreement. Cooperative Work Experience needs to be approved by Instructor & Center Director.

**MANUFACTURING CAREER CLUSTER – ALL**

*All Welding students may participate in the student organization SKILLS USA!*

## **Agriculture Education**

### **CASE: Intro. to AFNR (01011)**

Grade Level 9-12

Instructor: Molly Zahradka

Introduction to AFNR (Agriculture, Food, and Natural Resources) will introduce students to the world of agriculture, the pathways they may pursue, and the science, mathematics, reading, and writing components they will use throughout the CASE curriculum. Student experiences will involve the study of communication, the science of agriculture, plants, animals, natural resources, and agricultural mechanics.

**CAREER CLUSTER – ALL**

Credits: 1 per year

Prerequisite: None

### **Botany/Horticulture I (01053)**

#### **MAY COUNT AS A SCIENCE CREDIT**

Grade Level 10-12

Instructor: Molly Zahradka

Credits: 1 per year

Prerequisites: **None but priority is to students who have taken Intro to AFNR**

These courses prepare students to produce greenhouse/nursery plants and to maintain plant growth and propagation structures. Topics to be covered include: soils, plants, plant identification, and plant entomology. Courses examine the importance of plant cell structures, functions of cells, plant processes, nonvascular plants, vascular plants, roots, stems, leaves, flowers, and reproduction of plants. Students may be introduced to the biological, environmental, conservation, and ecological concepts encountered in our environment. Landscape design units will prepare students to design, construct, and maintain planted areas and devices for the beautification of home grounds and other areas of human habitation and recreation. These courses will reinforce and extend students' understanding of science by associating basic scientific principles and concepts with relevant applications in agriculture. Leadership development and supervised agricultural experience programs are also an integral part of this course.

**CAREER CLUSTER – Natural Resources/Environmental Service Systems/Plant Systems**

### **Botany/Horticulture II (01054)**

#### **MAY COUNT AS A SCIENCE CREDIT**

Grade Level 11-12

Instructor: Molly Zahradka

A continuation of Botany/Horticulture I.

Credits: 1 per year

Prerequisites: Botany/Horticulture I

**CAREER CLUSTER – Natural Resources/Environmental Service Systems/Plant Systems**

### **Ag Sales & Service (01034)** (1<sup>st</sup> Semester)

#### **Classroom or Online**

Grade Level 10-12

Instructor: Molly Zahradka

To provide students with skills necessary for entry into employment or furthering education in agriculture sales and service. The course deals with business organizations, business structures, job responsibilities, job applications, and interviewing, human relations, marketing, selling, displaying, using business machines, business accounting, and management skills. Learning activities are varied with classroom, laboratory, and field experiences. Leadership development and supervised agricultural experience programs are an integral part of this course.

**CAREER CLUSTER – Agribusiness Systems**

Credits: ½ per semester

Prerequisite: None

### **Agricultural Business Management (01035)** (2<sup>nd</sup> Semester)

#### **Classroom or Online**

Grade Level 10-12

Instructor: Molly Zahradka

A course designed to introduce the students to agribusiness management in the free enterprise system. It includes a study of economic principles, budgeting, recordkeeping, finance, risk management, business law, marketing, and careers in agribusiness. Leadership development and supervised agricultural experience programs are an integral part of this course.

**CAREER CLUSTER – Agribusiness Systems**

Credits: ½ per semester

Prerequisite: None

**CASE Principles of Agricultural Science – Plant (01082)** (1<sup>st</sup> Semester)

**Classroom or Online**

Grade Level 10-12

Credits: ½

Instructor: Molly Zahradka

Prerequisite: None

Principles of Agricultural Science–Plant is a foundation-level course that will teach students about the form and function of plant systems. Students are immersed in inquiry-based exercises filled with activities, projects and problems to teach them plant concepts through laboratory and practical experiences. Student experiences will include soils, hydroponics, plant anatomy and physiology, taxonomy, growing environments, sexual reproduction, asexual reproduction, insects and diseases, and production and marketing. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA programs and activities.

**CAREER CLUSTER – Plant Systems**

**Agronomy Science (01025)**(2nd Semester)

**Classroom or Online**

Grade Level 10-12

Credits: ½

Instructor: Molly Zahradka

Prerequisite: None

Agronomy is the study of plants and how they relate to soil. This course will study units in such areas as principles of crop science, field crops, plant anatomy, plant physiology, and the basics of safe and sustainable food and fiber production.

**CAREER CLUSTER – Plant Systems**

**Ecology & Wildlife (01063)**

**Classroom or Online**

Grade Level 9-12

Credits: 1 per year

Instructor: Molly Zahradka

Prerequisite: None

This course provides an opportunity for students to increase awareness of the close ties among living organisms. Natural and environmental concerns with the interrelationships of living organisms and the world around us. Leadership development and supervised agricultural experience programs are also an integral part of this course.

**CAREER CLUSTER – Natural Resources & Environmental Services Systems**

**Veterinary Science (01067)**

**Classroom or Online**

Grade Level 10-12

Credits: 1 per year

Instructor: Molly Zahradka

Prerequisite: None

This course is designed to prepare students for careers in the field of animal science by introducing them to veterinary practices as they relate to both large and small animal species. The student will participate in laboratory and field investigations and demonstrate safety by using critical thinking, scientific reasoning, and problem solving to make informed decisions. They will research and describe the history of veterinary medicine, current topics, the importance of animals in society, and the professional ethics and laws that relate to veterinary medicine. The student will learn to explain the human-animal bond and describe the legal aspects of animal welfare. The student will identify anatomical structures and systems of animals and correct terminology while exploring animal management as it relates to animal identification, animal characteristics, and behavioral temperament (i.e. normal behavior compared to sick.) The student will evaluate animal diseases and identifies internal and external parasites, and can evaluate an animal's health during a clinical examination while safely operating and maintaining equipment used in veterinary science. The student will also learn to determine nutritional requirements and the importance of nutrition in maintaining a healthy animal. The student will thereby be conscious of procedures, skills, and objectives that are included in the job description of an animal care assistant.

**CAREER CLUSTER – Animal Systems**

### Veterinary Science II (01061)

Online

Grade Level 11-12

Credits: 1 per year

Instructor: Callahan Anderes

Prerequisite: Veterinary Science

This course is a continuation of Veterinary Science.

**CAREER CLUSTER – Animal Systems**

### Food Science & Processing (01068)

Classroom or Online

Grade Level 10-12

Credits: 1 per year

Instructor: Molly Zahradka

Prerequisite: None

This course is designed to introduce students to the processing of agricultural products. The course will include the processing of food, fiber, and material product processing for the global economy. Personal communication skills, human relation skills, leadership development skills, and supervised agricultural experiences will be emphasized.

**CAREER CLUSTER – Food Products & Processing Systems**

### Agricultural Leadership (01990)

Grade Level: 11-12

Instructor: Molly Zahradka

Prerequisite: Intro to AFNR & 1 other Ag Course

Prerequisite: 2 previous Ag Ed courses at the high school level (Exceptions apply?)

Course Description: This course provides students in agriculture an opportunity to expand and explore the fields of agriculture, leadership, and personal development on an individual basis. This course develops agricultural skills necessary for employment, entrepreneurship, or further education in agriculture and agricultural occupations by focusing on scholarships, communication, personal finance, career skills, and community development. Leadership development and service learning are integral to the success of this course.

### SAE-Supervised Ag Experience (01995)

By Arrangment

Grade Level 9-12

Credits: ¼, ½, or 1/year

Instructor: Molly Zahradka

Prerequisite: Completed an Ag Course

This course provides credit for student agricultural experience exploration. Fulfillment of the standards outlined in the Policy Statement for Supervised Agricultural Experience Programs in agricultural education in North Dakota. See instructor for details.

**CAREER CLUSTER – ALL**

### Cooperative Work Experience (01999)

By Arrangment

Grade Level 9-12

Credits: ¼, ½, or 1/year

Instructor: Molly Zahradka

Prerequisite: Completed an Ag Course

This course provides students with a regularly scheduled, supervised employment opportunity related to agriculture occupations in order to develop and improve work skills. The employment must be preceded by, or concurrent with, classroom instruction related to the work experience, consistent with the student's occupational goals, and related to the Agriculture Education program area. There shall be a training agreement among all partners to the work experience (school, employer, student, and parents/guardians) outlining the expectations of each party. The instructor shall also develop a specific training plan with the employer for each student placed. The training plan shall include provisions for assessment of student progress and for on-site visits by the instructor during the student's placement.

**CAREER CLUSTER – ALL**

*All Agriculture Education students may participate in the student organization FFA!*