Cass County Career and Technical Education Center (CCCTEC)

Program of Studies
2019-2020

Northern Cass

JAGUARS

West Fargo High

Fargo North

Central Cass

Fargo South

West Fargo Sheyenne

Fargo Davies

DAVIES EAGLES

NDSCS
THE SCIENCE OF SUCCESS.
North Dakota State College of Science

COORDINATED PLAN OF STUDY FOR AGRICULTURE EDUCATION

Environmental Service Systems or Plant Systems

CC CTEC	MIS03	Course Name	Cr
CC100	01011	Intro to Agriculture	.5
CC101	01053	Plant Science I (formerly Botany/Horticulture I)	.5
CC102	01054	Plant Science II (formerly Botany/Horticulture II)	.5
CC103	01069	World & International Agriculture (online)	.5
CC999	01999	Cooperative Work Experience	.5
		*Must take at least 2 credits	

COORDINATED PLAN OF STUDY FOR AVIATION TECHNOLOGY

Transportation Operation

CC CTEC	MIS03	Course Name	Cr
CC201	17812	Aviation Technology I (Session 1)	.5
CC202	17812	Aviation Technology I (Session 2)	.5
CC205/206	17813	Aviation Technology II	1
	17999	Cooperative Work Experience	.5
		*Must take at least 2 credits	

COORDINATED PLAN OF STUDY FOR DIESEL TECHNOLOGY

Facility and Mobile Equipment Maintenance

CC CTEC	MIS03	Course Name	Cr
CC307	17040	Diesel Technology I	1
CC308	17041	Diesel Technology II	2
		*Must take at least 2 credits	

COORDINATED PLAN OF STUDY FOR HEALTH SCIENCE

Therapeutic Services

CC CTEC	MIS03	Course Name	Cr
CC507	07032	Certified Nurse Assistant	.5
HEC201/202	07033	*Health Science I (designated sites)	1
HEC304	07033	*Health Science II (designated sites)	1
CC505	07034	Prevention and Care of Athletic Injuries	.5
CC501	07036	Medical Terminology Online – Dual Credit	.5
		*Must take at least 2 credits	

COORDINATED PLAN OF STUDY FOR INFORMATION TECHNOLOGY

CC CTEC	MIS03	Programming and Software Development	Cr
CC601	27120	Intro to Coding and Gaming	.5
CC603	27125	Programming I – Java	.5
CC604	27127	AP Programming – Java (AP)	.5
CC605	27128	Mobile App Development & Security	.5
		Network Systems	
VE285, TECH323	27219	IT Essentials I	.5
VE286, TECH324	27120	IT Essentials II	.5
VE391	27265	Cisco I – Introduction to Networks	.5
VE392	27267	Cisco II – Router & Switching Essentials	.5
VE393	27268	Cisco III – Scaling Networks (WANs)	.5
VE394	27269	Cisco IV – Connecting Networks (LANs)	.5
		*Must take at least 2 credits from a pathway	

COORDINATED PLAN OF STUDY FOR WELDING & AUTOMATED MANUFACTURING

Production

CC CTEC	MIS03	Course Name	Cr
VE 241, VE242	17113	Automated Manufacturing I	1
VE341, VE342	17113	Automated Manufacturing II	1
VE339 or CC610	17236	Welding I	1
VE340 or CC611	17237	Welding II	1
		*Must take at least 2 credits	

*Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the ND CTE Scholarship.

Course Code Legend: CC=CCCTEC, HEC=West Fargo, TECH=West Fargo, VE=Fargo

TABLE OF CONTENTS

COURSE DELIVERY METHODS

On-site:

Students will participate in classroom and lab activities at a designated school site. Students may be responsible for transportation dependent upon the host site.

Video Conferencing:

The course will be delivered via video conferencing tools and online resources. Courses will be scheduled by period. Students will have the opportunity to learn through direct instruction, activities, and feedback from their instructor. Field trips may be scheduled by the instructor for extended learning and career experiences.

Online:

The course will be delivered through an (asynchronous) online format using a classroom learning management tool such as (Google Classroom, Schoology, etc.). Instructors will have a scheduled office hour to provide feedback and answer student questions via e-mail, an online chatroom, or by phone. Schools will have the option to flexibly schedule students based open hours in their schedule.

Summer Session

HEALTH SCIENCE CAREERS

CERTIFIED NURSING ASSISTANT
Course Code: (CC507)
Grade: 11-12
Credit\Length: ½ Credit = (75 hours - includes Clinical Observation)
Summer sessions will be scheduled on the host sites summer school schedule:
- **June 3 – 17, 8:00 AM – 2:00 pm,**

Prerequisite: None
Location and delivery method: West Fargo High School
Instructor: Mrs. Traci Tarnasky
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

This class is developed for students who are interested in a career in nursing or who are interested in preparing themselves for employment as a Certified Nursing Assistant. The class involves both lecture and lab instruction. Basic nursing principles are taught in a lecture setting while communication techniques, introduction to basic physical assessment and basic nursing procedures are demonstrated in the clinical and lab setting. Emphasis is placed on the care of the client in the long-term care setting. In addition to the classroom instruction, the student will complete 15 hours of community observations. The clinical experience is scheduled and supervised by the instructor. Upon successful completion of the skills portion of the course the student will be eligible to write the certified nurse aid examination (students wishing to do so will be responsible of payment for this exam. Cost is approximately $120. (**MIS03 Course Code 07036**)

AGRICULTURE EDUCATION

FOUNDATIONS OF AGRICULTURE
Course Code: (CC100)
Grade: 9-12
Credit\Length: 1\2 credit – (Fall)
Prerequisite: None
Location and delivery: Video – online class with labs and field trips
Instructor: Mr. Todd Weinmann
Transportation: Students will be responsible for transportation.
Schools will provide bussing for field trips.

This applied course is designed to enhance student's perceptions of
agriculture, its applications, and leadership development as the core foundation of the Agriculture Education program. Individual
units will familiarize the student with: basic mechanical theory and skills – emphasis will be placed on safety and proper use of
tools and equipment; principles of evaluation and selection of animals. Topics may include: soils, irrigation, land judging, plants,
crop and weed identification, range management, horticulture, nursery, diseases, insects, and chemicals. This applied course
introduces students to agricultural sciences with emphasis on technical skills, entrepreneurship, and occupational opportunities.
(MIS03 Course Code #01012)

PLANT SCIENCE I (formerly BOTANY/HORTICULTURE/LANDSCAPE DESIGN I)
Course Code: (CC101)
Grade: 9-12
Credit\Length: 1\2 credit – (Fall)
Prerequisite: None
Location and delivery: Video – online class with labs and field trips
Instructor: Mrs. Gabes Kieffer
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

This is a participation-oriented course focusing on the fundamental principles of horticulture. Students will be exposed to a variety
of careers and to propagating plants in a greenhouse setting. Students will study Botany/plant science, growing plants, the business
of raising and selling plants, and small business management. Hands-on experiences will include computer assisted landscape
design, home and business landscaping, commercial greenhouse operation, plant nutrition, landscape beautification, and community
involvement. Students will raise a variety of plants as a part of the lab activities. This class will be delivered through video model
of on-line coursework, field trips, and lab activities. **(MIS03 Course Code 01053)**

PLANT SCIENCE II (formerly BOTANY/HORTICULTURE/LANDSCAPE DESIGN II)
Course Code: (CC102)
Grade: 10-12
Credit\Length: 1\2 credit – (Spring)
Prerequisite: Plant Science I
Location and delivery: Video hybrid – class-labs by arrangement
Instructor: Mrs. Gabes Kieffer
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

This course is a continuation of Plant Science I (formerly Botany/Horticulture I) to 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. This class will be delivered through hybrid model of on-line
coursework, field trips, and lab activities. **(MIS03 Course Code 01054)**

(New) WORLD & INTERNATIONAL AGRICULTURE
Course Code: (CC103)
Grade: 10-12
Credit\Length: 1\2 credit (Spring)
Prerequisite: None
Location and delivery: Online class-labs by arrangement
Instructor: Mr. Todd Weinmann
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

A course designed to introduce students to global agriculture. This course also includes agricultural career development, leadership, communications, and personal finance. Learning activities are varied with classroom, laboratory, and field experiences. Leadership development and supervised agricultural experience programs are an integral part of this course. **(MIS03 Course Code 01069)**

AVIATION TECHNOLOGY

AVIATION TECHNOLOGY I (Session 1)
Course Code: (CC201)
Grade: 9-12
Credit\Length: 1/2 credit (Fall or Spring)
Prerequisite: None
Location and delivery method: On-site Sheyenne HS – 8:20 am – 9:15 am
Instructor: Mr. David Gravdahl
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

Exposes students to careers in the field of aviation, such as air traffic control, flight dispatching and airport management, etc. The course covers fundamentals of flight, flight operations, aviation weather, performance and navigation. Units of instruction include; flight history, safety, space, airport layout, aeronautical charts, radar, radio procedures, aerodynamics, weather patterns and hazards. Emphasis on applied academics in math and science are integrated, along with decision-making principles as it applies to flight-related factors. Lessons are enhanced by guest speakers and field trips to local airports and aviation sites.
(MIS03 Course Code 17812)

AVIATION TECHNOLOGY I (Session 2)
Course Code: (CC205/206)
Grade: 9-12
Credit\Length: 1/2 credit (Fall or Spring)
Prerequisite: Aviation Technology I (Session 1)
Location and delivery method: On-site Sheyenne HS – 8:20 am – 9:15 am
Instructor: Mr. David Gravdahl
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

This course is a continuation of concepts learned in Aviation I. This course will cover advanced flight topics from area Aviation experts. Students will be exposed to new concepts in UAS and drone technology as well as expanding topics covered in Aviation I to an advanced level. Students will be preparing to pass the Federal Aviation Administration (FAA) private pilot written exam. Successful completion of Aviation I is a prerequisite.
(MIS03 Course Code 17812)

AVIATION TECHNOLOGY II
Course Code: (CC205, CC206)
Grade: 10-12
Credit\Length: 1 credit
Prerequisite: Aviation I (Sessions 1 & 2)
Location and delivery method: On-site Sheyenne HS – 7:25 – 8:15 am
Instructor: Mr. David Gravdahl
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

This course is a continuation of concepts learned in Aviation I. This course will cover advanced flight topics from area Aviation experts. Students will be exposed to new concepts in UAS and drone technology as well as expanding topics covered in Aviation I to an advanced level. Students will be preparing to pass the Federal Aviation Administration (FAA) private pilot written exam. Successful completion of Aviation I is a prerequisite. **(MIS03 Course Code 17813)**

COOPERATIVE WORK EXPERIENCE
Course Code: (CC999)
Grade: 11-12
Credit\Length: Maximum 2 credits in a student's high school experience. Open to
Prerequisite: The employment must be preceded by, or concurrent with, classroom instruction related to the work experience. Students must be at least 16 years old and may be paid a wage by the employer.
Location and delivery: a training agreement among all partners (school, employer, student, and parents/guardians) to the work experience is required outlining the expectations of each party.
Instructor: Registration only by arrangement with instructors from Agriculture, Aviation, Diesel, and Welding.
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

Provides students with a regularly scheduled, supervised employment opportunity related to Trade and Industrial Occupations in order to develop and improve work skills. **(MIS03 Course Code 17999)**

DIESEL TECHNOLOGY

DIESEL TECHNOLOGY I
Course Code: (CC301, CC302)
Grade: 10-12
Credit\Length: 1 credit
Prerequisite: None
Location and delivery method: On-site Sheyenne HS - 7:25 am – 8:15 am
Instructor: Mr. Ralph Elletson
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

This course allows students to experience a variety of diesel and heavy
equipment practices. Students will explore the field of diesel and heavy-duty equipment repair, and will learn the basics of safety, equipment identification, and the use of hand and power tools in lab setting. Students will learn a about careers within the diesel and heavy equipment repair industry. Lessons will be enhanced by industry partners such as: RDO, General Equipment, Butler, and Titan Machinery. Students will be introduced to diesel engine operation and components, hydraulics, brakes\suspension, and electrical. Technology-related mathematics, reading, writing, vocabulary, blueprint reading, and science are integrated throughout the curriculum. NATEF standards and guidelines are followed. This course is a prerequisite to Diesel Technology II. **(MIS03 Course Code 17040)**

DIESEL TECHNOLOGY II
Course Code: (CC305, CC306)
Grade: 11-12
Credit\Length: 2 credit – Block (8:20 – 10:10 am) (NDSCS Dual Credit options)
Prerequisite: Diesel I
Location and delivery method: On-site Sheyenne HS
Instructor: Mr. Ralph Elletson – Sheyenne High School
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

This course will serve as a continuation from Diesel I. Students will be exposed to diesel careers and college options in construction, agriculture, aviation, and trucking vehicles. Students will be required to demonstrate sound safety practices, shop organization and management. Students will learn advanced diesel concepts in fuel systems, steering and suspension, tire and wheel diagnostics, service and repair of electrical and electronic controls and systems, engines, drive train, hydraulics and air brake systems. Training and practice of Preventive Maintenance Inspection (PMI) is accomplished. Lessons will be enhanced by industry collaboration, job shadows and internship experiences. Technology, mathematics, reading, writing, vocabulary, blueprint reading and science are integrated throughout the curriculum. NATEF standards and guidelines are followed. **(MIS03 Course Code 17041)**

HEALTH SCIENCE & MEDICAL CAREERS

MEDICAL TERMINOLOGY
Course Code: (CC501, CC502)
Grade: 10-12
Credit\Length: 1\2 credit (Dual Credit Option)
Prerequisite: None
Location and delivery method: Online
Instructor: Mrs. Andrea Benson, Mrs. Traci Tarnasky
Transportation: None

This class is designed to introduce students to the health information technology (Medical Records) 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. Students choosing to participate must complete the NDSCS application process and required $35 fee. **(MIS03 Course Code 07036)**

PREVENTION\CARE OF ATHLETIC INJURIES
Course Code: (CC505)
Grade: 10-12
Credit\Length: 1\2 credit
Prerequisite: None
Location and delivery method: Video conferencing or Online
Instructor: Mrs. Traci Tarnasky
Transportation: Schools will provide bussing for field trips.

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 in one semester to complete the requirements to become a student athletic trainer. **(MIS03 Course Code 07034)**

HEALTH SCIENCE I
Course Code: (CC506)
Grade: 10-12
Credit\Length: 1 credit
Prerequisite: None
Location and delivery method: On-site or Online
Instructor: TBD
Transportation: Students may be responsible for transportation. Schools will provide bussing for field trips.

This course explores the many career opportunities available in the medical, nursing and allied health professions. Students learn basic health-provider skills, including CPR and First Aid. Curriculum content includes ethics, legalities, safety, medical terminology, communication skills, infection control, professional attitudes, anatomy, physiology and basic clinical skills. A variety of specialists from many health professions are utilized as speakers. During the spring, students participate in an observation of a health professional. (Examples: Dentistry, Dental Hygienist, Nursing, Pharmacy, Radiology, Sports Medicine, Veterinary Technician.) **(MIS03 Course Code 07033)**

CERTIFIED NURSING ASSISTANT (CNA)
Course Code: (CC507)
Grade: 11-12
Credit\Length: ½ Credit
Summer School Session: On-site
Prerequisite: None
Location and delivery method: On-site
Instructor: TBD based on locations
Transportation: Students may be responsible for transportation. Schools will provide bussing for field trips.

This class is developed for students who are interested in a career in nursing or who are interested in preparing themselves for employment as a Certified Nursing Assistant. The class involves both lecture and lab instruction. Basic nursing principles are taught in a lecture setting while communication techniques, introduction to basic physical assessment and basic nursing procedures are demonstrated in the clinical and lab setting. Emphasis is placed on the care of the client in the long-term care setting. In addition to the classroom instruction, the student will be responsible for completing 16 hours of clinical experience outside of the classroom. The clinical experience is scheduled by the instructor. Upon successful completion of the skills portion of the course the student will be eligible to take the certified nurse aid examination. Health Science 1 is not required but will provide supportive background knowledge for this course. **(MIS03 Course Code 07032)**

INFORMATION TECHNOLOGY

INTRO TO CODING AND GAMING
Course Code: (CC601)
Grade: 9-12
Credit\Length: 1\2 credit
Prerequisite:
Location and delivery method: Video Conferencing
Instructor: Mr. Ullrich Reichenbach – Fargo, Mr. Stephan Garaas or Mr. Ronald Thompson – West Fargo
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

The course will provide students with a foundation for understanding programming languages. Fundamentals of logic, design, coding, structures, and controls will be applied through a game-like environment, such as Scratch, GameSalad or emerging programs. Careers in coding and programming are explored. Students will experience project-based learning, teamwork, problem-solving, and increase communication. **(MIS03 IT Course Code 27120)**

COMPUTER PROGRAMMING I – Java (Fargo)
Course Code: (CC603) Fargo Code (VE289)
Grade: 10-12
Credit\Length: 1\2 credit
Prerequisite: Intro to Coding and Gaming
Location and delivery method: Video Conferencing
Instructor: Mr. Ullrich Reichenbach - Fargo or Mr. Stephan Garaas or Mr. Ronald Thompson – West Fargo
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

This course provides an introduction to the field of Computer Science, including design and coding principles. By studying case studies and designing graphical user interfaces, students will learn the principles of object-oriented programming, define classes, instantiate objects, and write methods. Students will also work with algorithms which make logical decisions and iterate.
(MIS03 IT Course Code 27125)

MOBILE APP DEVELOPMENT & SECURITY
Course Code: (CC605)
Grade: 10-12
Credit\Length: 1\2 credit (Fall or Spring)
Prerequisite: None
Location and delivery method: Video Conferencing

Instructor: Mr. Stephen Garaas – West Fargo
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

Students use mobile technology to solve everyday problems for their community so why not task them to develop one? In this course students will learn the basics of the app system and software development cycle. They will also learn about code modification and additional basic app coding skills, including the topics of variables, simple data types, conditional programming constructs, and simple library classes. The course also provides a foundation for the design, implementation, and management of database systems. Teams will have the opportunity to participate in the Verizon App Challenge. **(MIS03 IT Course Code 27128)**

AP COMPUTER PROGRAMMING – Java (Fargo)
Course Code: (CC604) Fargo Code (VE290)
Grade: 10-12
Credit\Length: 1\2 credit
Prerequisite: C or above in Computer Programming 1
Location and delivery method: Video Conferencing and Online
Instructor: Mr. Ullrich Reichenbach – Fargo, Mr. Stephen Garaas – West Fargo
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

Students will study abstract classes, arrays, lists, and advanced concepts of graphical user interfaces. Main topics also include sequences, searches, input and output streams. This course, together with the first semester, will prepare students to take the AP exam in Computer Science if they wish. **(MIS03 IT Course Code 27127)**

IT ESSENTIALS I
Course Code: Fargo Code (VE285)
Grade: 10-12
Credit\Length: 1\2 credit -
Prerequisite: None
Location and delivery method: Video Conferencing and Online
Instructor: Mr. Ullrich Reichenbach – Fargo – Mr. Stephen Garaas – West Fargo
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

This is the first of two courses that prepare students to obtain their CompTIA A+ Essentials certification. This course focuses on computer hardware, operating systems, troubleshooting computer systems and customer service skills/professionalism required of entry-level IT professionals. Students will learn to identify internal components of the computer, disassemble and assemble a complete personal computer, install multiple operating systems, and create/configure multiple virtual computers using virtualization software. Students will also learn how to configure computers to access multiple types of networks. **(MIS03 IT Course Code 27219)**

IT ESSENTIALS II
Course Code: Fargo Code (VE286)
Grade: 10-12
Credit\Length: 1\2 credit
Prerequisite: None
Location and delivery method: Video Conferencing and Online
Instructor: Mr. Ullrich Reichenbach – Fargo - Mr. Stephen Garaas – West Fargo
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

This is the second of two courses that prepare students to obtain their CompTIA A+ Essentials certification. This course focuses on handheld mobile devices (Android and Apple IOS), laptop computers, printers, and customer service skills/professionalism required of entry-level IT professionals. Students will disassemble and reassemble a laptop computer, practice communication skills, troubleshoot hardware and software issues, and preform preventative maintenance activities. Students will have an opportunity to research areas of computing that they are interested and work with circuit boards to understand how electricity and data flow through a computer. **(MIS03 IT Course Code 27220)**

CISCO I – INTRODUCTION TO NETWORKS
Course Code: Fargo Code (VE391)
Grade: 10-12
Credit\Length: 1\2 credit - Optional 4 Credits Dual Credit
Prerequisite:
Location and delivery method: Video Conferencing and Online

Instructor: Mr. Ullrich Reichenbach - Fargo
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

This is the first level of a four-part series on computer networking. Participants will learn about current and emerging networking technology. The course will cover safety, networking terminology and protocols, network standards, LAN's, WAN's, the OSI model, cabling, router configuration, topologies, IP addressing, and other general networking information. Students will learn the principles of both wired and wireless networks Students will complete labs both using virtual software and physical hardware. The goal is for participants completing levels 1-4 to be prepared to take the industry certification exam and become a Certified Cisco Networking Associate (CCNA). **(MIS03 IT Course Code 27265)**

CISCO II – ROUTING & SWITCHING ESSENTIALS
Course Code: Fargo Code (VE392)
Grade: 10-12
Credit\Length: 1\2 credit – Optional 4 Credits Dual Credit
Prerequisite: Cisco I
Location and delivery method: Video Conferencing and Online
Instructor: Mr. Ullrich Reichenbach - Fargo
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

This is the second level of a four-part series on computer networking. Successful completion of this class will earn ½ of a high school credit. Participants will review what they learned in level I and continue to learn more advanced computer networking skills. Following a review of the basic concept, participants will concentrate on router configuration and LAN switching. Beginning network management principles will be learned. **(MIS03 IT Course Code 27266)**

CISCO 3 – SCALING NETWORKS
Course Code: Fargo Code (VE393)
Grade: 11-12
Credit\Length: 1\2 credit – Optional 4 Credits Dual Credit
Prerequisite: Cisco I, Cisco II
Location and delivery method: Online
Instructor: Mr. Ullrich Reichenbach - Fargo
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

This is the third of the four-part series on computer networking. Successful completion of this class will earn ½ of a high school credit. Participants will engage in a review of basic networking principles including the OSI model, networking media, configuration and advanced LAN switching. Participants will demonstrate their knowledge and skill by designing a network. **(MIS03 IT Course Code 27267)**

CISCO 4: CONNECTING NETWORKS
Course Code: Fargo Code (VE394)
Grade: 11-12
Credit\Length: 1\2 credit – Optional 4 Credits Dual Credit
Prerequisite: Cisco I, Cisco II, Cisco III
Location and delivery method: Online
Instructor: Mr. Ullrich Reichenbach - Fargo
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

An introduction to Wide Area Networks and WAN design, introducing Point-to-Point Protocol (PPP), Integrated Services Digital Network (ISDN), and Frame Relay, router configurations. Emphasis on WAN design and case study projects utilizing concepts from levels 1, 2, and 3. This is the last in the series of networking classes before you elect to take the industry standard test which if passed will result in a highly-valuable Cisco Certified Networking Associate credential. **(MIS03 IT Course Code 27268)**

WELDING\AUTOMATED MANUFACTURING

AUTOMATED MANUFACTURING I
Course Code: Fargo (VE241, VE242)
Grade: 9-12
Credit\Length: 1 credit
Prerequisite: None
Location and delivery method: On-site South High School
Instructor: Mr. Henjum – South High School
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

This course offers students an introduction to the design and operation of a metals production system (machining, welding, and fabrication). Students will learn how to properly read and create layout drawings. Different aspects of quality control, production planning and procedures, and different types of product manufacturing will be emphasized. This is a hands-on, project-based class where students are able to design and develop various projects. Students use modern equipment such as a CNC plasma table, CNC machine tools and a variety of electric welding equipment. Students develop hard and soft employability skills and explore several occupations in the manufacturing sector. **The differentiated instructional approach used in this class provides interesting and challenging activities for students of all abilities. (MIS03 Course Code 17113)**

AUTOMATED MANUFACTURING II
Course Code: Fargo (VE241, VE242)
Grade: 9-12
Credit\Length: 1 credit
Prerequisite: None
Location and delivery method: On-site South High School
Instructor: Mr. Henjum – South High School
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

This course offers students an introduction to the design and operation of a metals production system (machining, welding, and fabrication). Students will learn how to properly read and create layout drawings. Different aspects of quality control, production planning and procedures, and different types of product manufacturing will be emphasized. This is a hands-on, project-based class where students are able to design and develop various projects. Students use modern equipment such as a CNC plasma table, CNC machine tools and a variety of electric welding equipment. Students develop hard and soft employability skills and explore several occupations in the manufacturing sector. The differentiated instructional approach used in this class provides interesting and challenging activities for students of all abilities. (MIS03 Course Code 17113)

WELDING I & II
Course Code: Fargo Code (VE339, VE340)
Grade: 10-12
Credit\Length: 1 credit – Semester 1- Block (8:05 – 9:52)
Dual Credit: Optional – MGFT 110 and/or MGFT 123
Prerequisite: Welding I to participating in Welding II
Location and delivery method: On-site NDSCS-Fargo
Instructor: Mr. Lee Larson or Mr. Mitch VanVleet - NDSCS
Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

This course gives beginning instruction in laboratory safety and the use of personal protection equipment, with strong emphasis on the safe handling of welding and cutting equipment. It includes basic hands-on instruction on Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), and Oxy-Fuel Cutting (OFC) on various thicknesses of metal and techniques used. Also covered are welding supplies and equipment. Students choosing to participate must complete the NDSCS application process and required $35 fee. **(MIS03 Course Code 17236)**

Course Implementation and\or Rotation Schedule

Program\Course	Year 2 2015-2016	Year 3 2016-2017	Year 4 2017-2018	Year 5 2018-2019	Year 6 2019-2020
Agriculture Education					
Foundations of Agriculture				Fall	Fall, Pd 8
Plant Sciences I (formerly Botany\Horticulture I)	Spring – Pd 8	Fall	Spring	Spring	Fall, Pd 8
Plant Sciences II (formerly Botany\Horticulture II)		Spring	Off	TBD	Spring, Pd 8
World & International Agriculture		Fall	Off	Spring	Spring, Pd 8
Agriculture Sales			Off	Off	
Agriculture Business			Off	Off	
Small Animal Care			Off	Developing	Pilot - CC
Veterinary Science			Off	Developing	Pilot - CC
Aviation					
Aviation I (Session 1)	Year – Pd 1	Year	Year	Fall	Both
Aviation I (Session 2)				Spring	Both
Aviation II	Year – Pd 2	Year	Year	Year	Year
Diesel Technology					
Diesel Technology I	Year-Pd 1	Year	Year	Year	Year
Diesel Technology II		Year Block	Year Block	Year Block	Year Block
Health Science					
Medical Terminology	Sem-Online	Online	Online	Online - Both	Online - Both
Prevention\Care	Spring-video	Sem 1 or 2	Online	Spring Online	Online - Both
Certified Nursing Assist	Summer	Sem 1 or 2	Summer, Spring	Summer, Spring	Summer, Spring
Health Science I					TBD Year
Information Technology					
IT Essentials I (NEW)			Off	Off	Offered
IT Essentials II (NEW)			Off	Off	Offered
Computer Coding & Gaming		Fall	Fall or spring	Fall or spring	
Visual Basic – Dual Credit	Develop	Spring	C# - spring	NDSCS dropped	Not available
Mobile App		Fall	Fall or spring	Spring	Both
Comp Program I – Java	Develop	Fall	Fall	Fall	Both
AP - Java	Develop	Spring	Spring	Spring	Spring
Cisco I		Fall	Year	Year	Fall
Cisco II		Spring	Year	Year	Spring
Cisco III		Fall	Year	Year	Fall
Cisco IV		Spring	Year	Year	Spring
Welding\Auto Manufacturing					
Welding I	Fall Pd 1-2	Fall	Fall	Fall	Fall
Welding II	Spring Pd 1-2	Spring	Spring	Spring	Spring
Automated Manufacturing I		Year	Year	Year	Year

Course Code Schedule

Course Name	Course Code	CCCTEC Code & Fargo
INTRO TO AGRICULTURE	(01011)	(CC100)
PLANT SCIENCE I (formerly BOTANY/HORTICULTURE I)	(01053)	(CC101)
PLANT SCIENCE II (formerly BOTANY/HORTICULTURE II)	(01054)	(CC102)
WORLD & INTERNATIONAL AGRICULTURE	(01069)	(CC103)
AVIATION TECHNOLOGY I (Session 1)	(17812)	(CC201)
AVIATION TECHNOLOGY I (Session 2)	(17812)	(CC202)
AVIATION TECHNOLOGY II	(17813)	(CC205, CC206)
DIESEL TECHNOLOGY I	(17040)	(CC301, CC302)
DIESEL TECHNOLOGY II - BLOCK	(17040)	(CC305, CC306)
MEDICAL TERMINOLOGY (online)	(07036)	(CC501 OR CC502)
PREVENTION\CARE OF ATHLETIC INJURIES	(07034)	(CC505)
HEALTH SCIENCE I	(07033)	(CC506)
HEALTH SCIENCE II	(07033)	(CC507)
SUMMER SCHOOL – CERTIFIED NURSING ASSIST	(07032)	(CC507) OR (VE385)
INTRO TO CODING & GAMING	(27120)	(CC601)
COMPUTER PROGRAMMING I – Java	(27125)	(CC603)
AP COMPUTER PROGRAMMING – Java	(27127)	(CC604)
MOBILE APP DEVELOPMENT & SECURITY	(27128)	(CC605)
IT ESSENTIALS I	(27219)	(VE285)
IT ESSENTIALS II	(27220)	(VE286
CISCO I–INTRO TO NETOWORKING ESSENTIALS	(27265)	(CC604) OR (VE391)
CISCO II – ROUTING & SWITCHING ESSENTIALS	(27267)	(CC605) OR (VE392)
CISCO III – SCALING NETWORKS (WANS)	(27268)	(CC606) OR (VE393)
CISCO IV – CONNECTING NETWORKS (LANS)	(27269)	(CC607) OR (VE394)
AUTOMATED MANUFACTURING I	(17113)	(VE241, VE242)
AUTOMATED MANUFACTURING II	(17113)	(VE241, VE242)
WELDING I & II	(17236)	(VE339, VE340) (CC610, CC611)