



High School Curriculum Guide

**Cardinal Community
School District
4045 Ashland Road
Eldon, Iowa 52554**

SUBJECT AREA 1: ENGLISH LANGUAGE AND LITERATURE

COMPREHENSIVE LANGUAGE ARTS

01001 English 1 (2 Semesters)

English/Language Arts I (9th grade) courses build upon students' prior knowledge of grammar, vocabulary, word usage, and the mechanics of writing and usually include the four aspects of language use: reading, writing, speaking, and listening. Typically, these courses introduce and define various genres of literature, with writing exercises often linked to reading selections.

01002 English II (2 Semesters)

English/Language Arts II (10th grade) courses usually offer a balanced focus on composition and literature. Typically, students learn about the alternate aims and audiences of written compositions by writing persuasive, critical, and creative multi-paragraph essays and compositions. Through the study of various genres of literature, students can improve their reading rate and comprehension and develop the skills to determine the author's intent and theme and to recognize the techniques used by the author to deliver his or her message.

01003 English III (2 Semesters)

English/Language Arts III (11th grade) courses continue to develop students' writing skills, emphasizing clear, logical writing patterns, word choice, and usage, as students write essays and begin to learn the techniques of writing research papers. Students continue to read works of literature, which often form the backbone of the writing assignments. Literary conventions and stylistic devices may receive greater emphasis than in previous courses.

01004 Senior English (2 Semesters)

English/Language Arts IV (12th grade) courses blend composition and literature into a cohesive whole as students write critical and comparative analyses of selected literature, continuing to develop their language arts skills. Typically, students primarily write multi-paragraph essays, but they may also write one or more major research papers.

ENGLISH ELECTIVES

01061 Film Lit (2 Semesters)

This class provides an introduction to the basic tools of film analysis. We will examine how elements like cinematography, editing and sound work together to create meaning in a range of films. We will also examine how these elements are put together in different types of films – narratives, documentaries and experimental cinema – and how films function in society to circulate ideas and ideologies. Intro to Film is a class providing you with the skills to analyze film aesthetics, as well as the tremendously important role movies play in our culture.

ENG 105 IHCC Composition I & II

This course emphasizes analytical writing skills and stylistic competence developed through source- and non-source-based essays. Students will write at least four 800-1000 word essays, including 3-5 source-based essays and no more than one non-source essay. Students will respond to written and visual texts drawn from diverse sources and will use documentation correctly. Emphasis will also be placed on essay structure, grammatical correctness, and development of a professional voice through writing.

SPEECH AND COMMUNICATION

01151 Public Speaking (2 Semesters)

Public Speaking courses enable students, through practice, to develop communication skills that can be used in a variety of speaking situations (such as small and large group discussions, delivery of lectures or speeches in front of audiences, and so on). Course topics may include (but are not limited to) research and organization, writing for verbal delivery, stylistic choices, visual and presentation skills, analysis and critique, and development of self-confidence.

SUBJECT AREA 2: MATHEMATICS

02002 General Math (2 Semesters)

General Mathematics courses reinforce and expand students' foundational mathematic skills, such as arithmetic operations using rational numbers; area, perimeter, and volume of geometric figures, congruence and similarity, angle relationships, the Pythagorean theorem, the rectangular coordinate system, sets and logic, ratio and proportion, estimation, formulas, solving and graphing simple equations and inequalities.

02053 Algebra IA (2 Semesters)

The first part in a multipart sequence of Algebra I. This course generally covers the same topics as the first semester of Algebra I, including the study of properties of rational numbers (i.e., number theory), ratio, proportion, and estimation, exponents and radicals, the rectangular coordinate system, sets and logic, formulas, and solving first-degree equations and inequalities. Specific content depends upon state standards.

02054 Algebra IB (2 Semesters)

The second part in a multipart sequence of Algebra I. This course generally covers the same topics as the second semester of Algebra I, including the study of properties of the real number system and operations, evaluating rational algebraic expressions, solving and graphing first-degree equations and inequalities, translating word problems into equations, operations with and factoring of polynomials, and solving quadratics. Specific content depends upon state standards.

02052 Algebra I (2 Semesters)

Algebra I courses include the study of properties and operations of the real number system; evaluating rational algebraic expressions; solving and graphing first degree equations and inequalities; translating word problems into equations; operations with and factoring of polynomials; and solving simple quadratic equations.

02056 Algebra II (2 Semesters)

Algebra II course topics typically include field properties and theorems; set theory; operations with rational and irrational expressions; factoring of rational expressions; in-depth study of linear equations and inequalities; quadratic equations; solving systems of linear and quadratic equations; graphing of constant, linear, and quadratic equations; properties of higher degree equations; and operations with rational and irrational exponents.

02072 Geometry (2 Semesters)

Geometry courses, emphasizing an abstract, formal approach to the study of geometry, typically include topics such as properties of plane and solid figures; deductive methods of reasoning and use of logic; geometry as an axiomatic system including the study of postulates, theorems, and formal proofs; concepts of congruence, similarity, parallelism, perpendicularity, and proportion; and rules of angle measurement in triangles.

02104 Advanced Math Topics (2 Semesters)

Math Analysis courses include the study of polynomial, logarithmic, exponential, and rational functions and their graphs; vectors; set theory; Boolean algebra and symbolic logic; mathematical induction; matrix algebra; sequences and series; and limits and continuity. They may also include some study of trigonometry and/or pre-calculus topics; continuity; the polar coordinate system; equations and graphs of conic sections; rotations and transformations; and parametric equations.

02110 Pre Calculus (2 Semesters)

Pre-Calculus courses combine the study of Trigonometry, Elementary Functions, Analytic Geometry, and Mathematic Analysis topics as preparation for calculus. Topics typically include the study of complex numbers; polynomial, logarithmic, exponential, rational, trigonometric, and circular functions, and their relations, inverses and graphs; trigonometric identities and equations; solutions of right and oblique triangles; vectors; the polar coordinate system; conic sections; Boolean algebra and symbolic logic; mathematical induction; matrix algebra; sequences and series; modeling linear, quadratic, exponential, and trigonometric data; and limits and continuity.

INDIAN HILLS COMMUNITY COLLEGE

Math for Liberal Arts

This course is intended for students with a wide variety of mathematical backgrounds. Emphasis is on problem-solving and applications. Among the topics included are logic, probability, statistics. At least two additional topics will be chosen from among set theory, algebra basics, voting theory, and consumer mathematics.

SUBJECT AREA 3: LIFE AND PHYSICAL SCIENCES

EARTH SCIENCE

03001 Earth Science (2 Semester)

Earth Science courses offer insight into the environment on earth and the earth's environment in space. While presenting the concepts and principles essential to students' understanding of the dynamics and history of the earth, these courses usually explore oceanography, geology, astronomy, meteorology, and geography.

03003 Environmental Science (2 Semesters)

Environmental Science courses examine the mutual relationships between organisms and their environment. In studying the interrelationships among plants, animals, and humans, these courses usually cover the following subjects: photosynthesis, recycling and regeneration, ecosystems, population and growth studies, pollution, and conservation of natural resources.

BIOLOGY

03051 Biology (2 Semesters)

Biology courses are designed to provide information regarding the fundamental concepts of life and life processes. These courses include (but are not restricted to) such topics as cell structure and function, general plant and animal physiology, genetics, and taxonomy.

CHEMISTRY

03101 Chemistry (2 Semesters - offered every other year)

Chemistry courses involve studying the composition, properties, and reactions of substances. These courses typically explore such concepts as the behaviors of solids, liquids, and gases; acid/base and oxidation/reduction reactions; and atomic structure. Chemical formulas and equations and nuclear reactions are also studied.

PHYSICS

03151 Physics (2 Semesters - offered every other year)

Physics courses involve the study of the forces and laws of nature affecting matter, such as equilibrium, motion, momentum, and the relationships between matter and energy. The study of physics includes examination of sound, light, and magnetic and electric phenomena.

03159 Physical Science (2 Semesters)

Physical Science courses involve study of the structures and states of matter. Typically (but not always) offered as introductory survey courses, they may include such topics as forms of energy, wave phenomenon, electromagnetism, and physical and chemical interactions.

SUBJECT AREA 4: SOCIAL SCIENCES AND HISTORY

GEOGRAPHY

04058 Western Civilizations I (Semester)

Ancient Civilizations courses provide a survey of the evolution of society from early man, the development of civilization in the ancient Middle East, the beginning & spread of Western Civilization by the Greek and Roman civilizations, and the rebuilding of Europe after the fall of Rome. Typically, in these courses, students study the rise and fall of civilizations and empires, with an emphasis on the legacies they provide to successive societies of Rome through the late Middle Ages.

04055 Western Civilization II (Semester)

Modern European History courses examine the development of political, social, and economic movements in Europe over the past few centuries (from the Renaissance period, or later, to the contemporary period) and usually include such topics as the rise of the modern nation state, scientific and industrial revolutions, the age of exploration and nationalism, imperialism, and world war.

His111 Western Civilization: Early Modern to Present (Semester).

This is a dual credit course that allows students to pick up three college credits through IHCC. The course examines the background of the French Revolution, the Napoleonic Era, industrialization, & nationalism. German and Italian unification, neo-colonialism, WWI, the Russian Revolution, the interwar period, the rise of Fascism and Nazism, WWII, the collapse of communism, and the emergence of the European Union.

04062 World Cultures (2 Semesters)

World People Studies courses allow students to study various types of subgroups that have something in common such as religion, gender, or culture. Similar in style to World Area Studies, but focusing on a group of people rather than on a specific region, these courses examine a subgroup's history, politics, economics, and/or culture.

U.S. HISTORY

04101 U.S. History (2 Semesters)

U.S. History Comprehensive courses provide students with an overview of the history of the United States from the end of the Reconstruction Period following the Civil War up to present day. These courses typically include a historical overview of political, military, scientific, and social developments.

04106 Current Events (2 Semester2)

Contemporary Issues courses study the political, economic, and social issues facing the United States and the world. These courses will focus on current issues but may include an examination of the historical events leading to the current issues.

HIS152: US History Since 1877. (Semester)

This is a dual credit course that allows students to pick up three college credits through IHCC. The course examines Westward expansion, industrialization, immigration, & urbanization. Topics include Populism & the Progressive Era, WWI, the Roaring Twenties, the Great Depression, WWII, the Cold War, and the post-Cold War period.

GOVERNMENT, POLITICS, AND LAW

04151 American Government (2 Semesters)

U.S. Government courses provide an overview of the structure and functions of the U.S. government and political institutions and examine constitutional principles, the concepts of rights and responsibilities, the role of political parties and interest groups, and the importance of civic participation in the democratic process. These courses may examine the structure and function of state and local governments and may cover certain economic and legal topics.

SOCIAL SCIENCES

04254 Psychology (Semester)

Psychology courses introduce students to the study of individual behavior. Course content typically includes (but is not limited to) an overview of the field of psychology, topics in human growth and development, personality and behavior, and abnormal psychology.

SUBJECT AREA 5: FINE AND PERFORMING ARTS

MUSIC

05101 General Band (2 Semesters)

General Band courses develop students' technique for playing brass, woodwind, and percussion instruments and cover a variety of nonspecific band literature styles (concert, marching, orchestral, and modern styles).

05110 Chorus (2 Semesters)

Chorus courses provide the opportunity to sing a variety of choral literature styles for men's and/or women's voices and are designed to develop vocal techniques and the ability to sing parts.

VISUAL ARTS

05154 Art 1 & Art 2 (Semester)

Creative Art Comprehensive courses provide students with the knowledge and opportunity to explore an art form and to create individual works of art. These courses may also provide a discussion and exploration of career opportunities in the art world. Initial courses cover the language, materials, and processes of a particular art form and the design elements and principles supporting a work of art. As students advance and become more adept, the instruction regarding the creative process becomes more refined, and students are encouraged to develop their own artistic styles. Although Creative Art courses focus on creation, they may also include the study of major artists, art movements, and styles.

05155 Painting & Drawing 1 & 2 (Semester)

Creative Art Drawing/Painting courses cover the same topics as Creative Art Comprehensive courses, but focus on drawing and painting. In keeping with this attention on two dimensional work, students typically work with several media (such as pen-and-ink, pencil, chalk, watercolor, tempera, oils, acrylics, and so on), but some courses may focus on only one medium.

05156 Drawing 1, 2, &3 (Semester)

Creative Art/Drawing courses cover the same topics as Creative Art/Drawing/Painting, but focus on drawing. In keeping with this attention on two-dimensional work, students typically work with several media (such as pen-and-ink, pencil, chalk, and so on), but some courses may focus on only one medium.

05158 Ceramics 1 & 2 (Semester)

Creative Art/Sculpture courses cover the same topics as Creative Art/Comprehensive courses, but focus on creating three-dimensional works. Students typically work with several media (such as clay, ceramics, wood, metals, textiles, and so on), but some courses may focus on only one medium.

05167 Photography (Semester)

This course is an introduction to the technical and aesthetic properties of digital photography with an emphasis on the use of a digital SLR camera as a tool for electronic photographic image making. Additionally, students will learn to create efficient digital workflow using basic image editing skills and software programs. Students will learn the technical aspects of photography as well as how to use the camera as a tool for creating art and idea expression.

SUBJECT AREA 6: FOREIGN LANGUAGE AND LITERATURE

06101 Spanish (2 Semesters)

Designed to introduce students to Spanish language and culture, Spanish I courses emphasize basic grammar and syntax, simple vocabulary, and the spoken accent so that students can read, write, speak, and understand the language at a basic level within predictable areas of need, using customary courtesies and conventions. Spanish culture is introduced through the art, literature, customs, and history of Spanish-speaking people.

06102 Spanish II (2 Semesters)

Spanish II courses build upon skills developed in Spanish I, extending students' ability to understand and express themselves in Spanish and increasing their vocabulary. Typically, students learn how to engage in discourse for informative or social purposes, write expressions or passages that show understanding of sentence construction and the rules of grammar, and comprehend the language when

spoken slowly. Students usually explore the customs, history, and art forms of Spanish-speaking people to deepen their understanding of the culture(s).

06103 Spanish III (2 Semesters)

Spanish III courses focus on having students express increasingly complex concepts both verbally and in writing while showing some spontaneity. Comprehension goals for students may include attaining more facility and faster understanding when listening to the language spoken at normal rates, being able to paraphrase or summarize written passages, and conversing easily within limited situations.

06104 Spanish IV (2 Semesters)

Spanish IV courses focus on advancing students' skills and abilities to read, write, speak, and understand the Spanish language so that they can maintain simple conversations with sufficient vocabulary and an acceptable accent, have sufficient comprehension to understand speech spoken at a normal pace, read uncomplicated but authentic prose, and write narratives that indicate a good understanding of grammar and a strong vocabulary.

06105 Spanish V (2 Semesters)

Spanish V courses extend students' facility with the language so that they are able to understand, initiate, and sustain general conversations on topics beyond basic survival needs. Reading and writing tasks will usually include all normal verb tenses (present, past, and future).

SUBJECT AREA 8: PHYSICAL, HEALTH, AND SAFETY EDUCATION

PHYSICAL EDUCATION

08001 Team Sports (Semester)

Physical Education courses provide students with knowledge, experience, and an opportunity to develop skills in more than one of the following sports or activities: team sports, individual/dual sports, recreational sports, and fitness/conditioning activities.

08001 Walking Physical Education (Semester)

Physical Education courses provide students with knowledge, experience, and an opportunity to develop skills in more than one of the following sports or activities: team sports, individual/dual sports, recreational sports, and fitness/conditioning activities.

08009 Weight Training (Semester)

Weight Training courses help students develop knowledge and skills with free weights and universal stations while emphasizing safety and proper body positioning; they may include other components such as anatomy and conditioning.

08005 Strength & Conditioning (Semester)

Fitness/Conditioning Activities courses emphasize conditioning activities that help develop muscular strength, flexibility, and cardiovascular fitness. This is a block schedule class.

HEALTH EDUCATION

08051 Health Education (2 Semesters)

Topics covered within Health Education courses may vary widely, but typically include personal health (nutrition, mental health and stress management, drug/alcohol abuse prevention, disease prevention, and first aid) and consumer health issues. The courses may also include brief studies of environmental health, personal development, and/or community resources.

SUBJECT AREA 9: COMPUTER AND INFORMATION SCIENCES COMPUTER LITERACY

MEDIA TECHNOLOGY

11152 Desktop Publishing (Semester)

Desktop Publishing courses integrate the knowledge and skills learning in word processing with the concepts, procedures and application of desktop publishing. Students learn to format, create and proofread brochures, programs, newsletters, web pages, presentations and manuscripts.

10202 Graphic Design I & II (Semester)

Computer Graphics courses provide students with the opportunity to explore the capability of the computer to produce visual imagery and to apply graphic techniques to various fields, such as advertising, TV/video, and architecture. Typical course topics include modeling, simulation, animation, and image retouching.

MANAGEMENT

12051 Introductory Business (Semester)

Introductory Business courses survey an array of topics and concepts related to the field of business. These courses introduce business concepts such as banking and finance, the role of government in business, consumerism, credit, investment, and management. They usually provide a brief overview of the American economic system and corporate organization. Introductory Business courses may also expose students to the varied opportunities in secretarial, accounting, management, and related fields.

12053 Entrepreneurship (Semester)

Entrepreneurship courses acquaint students with the knowledge and skills necessary to own and operate their own businesses. Topics from several fields typically form the course content: economics, marketing principles, human relations and psychology, business and labor law, legal rights and responsibilities of ownership, business and financial planning, finance and accounting, and communication. Several topics surveyed in Business Management courses may also be included.

FINANCE

12103 Personal Finance (Semester)

Finance courses are similar to Banking and Finance courses, but they focus specifically on finance, addressing how businesses raise, distribute, and use financial resources while managing risk. Course content typically involves modeling financial decisions (such as borrowing, selling equity or stock, lending or investing) typically undertaken by businesses.

MARKETING

12151 Introduction to Marketing (Semester)

Marketing is a course that examines the movement of goods and services from the producer to the consumer. The areas of retailing, wholesaling, channels of distribution, marketing research and pricing are approached from the total marketing concept.

12163 Sports and Entertainment Marketing (Semester)

Sports and Entertainment Marketing courses introduce students to and help them refine marketing and management functions and tasks that can be applied in amateur or professional sports or sporting events, entertainment or entertainment events, and the sales or rental of supplies and equipment.

SUBJECT AREA 10: AGRICULTURE, FOOD, AND NATURAL RESOURCES COMPREHENSIVE

18003 Intro to Agriculture (2 Semesters)

Comprehensive Agriculture and Natural Resources—Comprehensive courses cover a wide range of topics concerning agriculture and natural resources, including plant and animal science, production, and processing; environmental science and conservation; ecology; agricultural mechanics; agricultural construction; business operations and management; and the careers available in the agricultural/natural resources industry. They may also include topics such as chemical and soil science, forestry, agricultural marketing, and veterinary science.

PLANT SYSTEMS

18052 Greenhouse (Semester)

General Horticulture courses expose students to the art and science of growing plants, shrubs, trees, flowers, fruits, and vegetables. In doing so, they cover a wide variety of topics, including greenhouse and nursery operations, soils and media mixtures, fruit and vegetable production, turf/golf course management, interior and exterior plantscaping, irrigation systems, weed and pest control, and floral design.

Animal Science 18101(Semester)

Animal Production/Science Animal Production/Science courses impart information about the care and management of domestic and farm animals. These courses may cover animal nutrition, health, behavior, selection, reproduction, anatomy and physiology, facilities, product processing, and marketing. Students may study a particular species (swine, cattle, horses, fowl, sheep, and so on), or they may learn how to care for and maintain livestock as a more inclusive study.

18201 Agribusiness (Semester)

Agribusiness Management Agribusiness Management courses provide students with the information and skills necessary for success in agribusiness and in operating entrepreneurial ventures in the agricultural industry. These courses may cover topics such as economic principles, budgeting, risk management, finance, business law, marketing and promotion strategies, insurance, and resource management. Other possible topics include developing a business plan, employee/employer relations, problem-solving and decision making, commodities, and building leadership skills. These courses may also incorporate a survey of the careers within the agricultural industry.

AGRICULTURAL PRODUCTION/PROCESSING

18504 Natural Resources & Wildlife (2 Semesters)

Management Natural Resources Management courses combine the fields of ecology and conservation with planning for the efficient use and preservation of land, water, wildlife, and forests. Within the general area of natural resources management, these courses usually cover specific topics and uses, such as hunting or fishing preserves, forest production and management, wildlife preservation, and human outdoor recreation.

SUBJECT AREA 12: FAMILY CONSUMER SCIENCE

22202 Food and Nutrition I & II (Semester each)

Food and Nutrition courses provide students with an understanding of food's role in society, instruction in how to plan and prepare meals, experience in the proper use of equipment and utensils, and background on the nutritional needs and requirements for healthy living. Some classes place a heavier emphasis on the nutritional components of a balanced diet, while others concentrate on specific types of food preparation. Although these courses may present career opportunities in the foodservice industry, their emphasis is not career-related.

22208 Child Development I & II (Semester each)

Child Development is a class that studies the mental, physical, emotional, social, and intellectual development of a child from birth through elementary age. Students will learn skills in effective parenting, teaching, and nurturing of children. Students have the opportunity to take home a RealCare baby and experience first hand what caring for a child is like.

10656 Baking & Pastry I & II (Semester)

Culinary Art Specialty courses provide instruction in a particular type of cooking or culinary style. Examples of such specialty fields include baking, creating and decorating wedding cakes, Middle Eastern cuisine, and so on. These courses emphasize skills specific to the type of culinary art being studied.

19201 Clothing and Textiles (Semester)

Clothing and Textiles courses introduce students to and expand upon the various aspects of apparel, garment construction, and the textile industry, conveying the commercial application of design principles, production processes, and maintenance techniques. These courses usually address the selection, characteristics, care, and repair of various textiles; operation and care of commercial sewing machines; design, construction, and production of fabrics and/or garments; and career opportunities in the garment or textile industry.

COLLEGE PREP

22102 How To Be Successful in College (Trimester)

This course introduces students to the fundamental skills necessary for college success. Topics include: study and test-taking skills, college culture and services, financial aid and literacy, health and wellness, policies and procedures.

INDIAN HILLS COMMUNITY COLLEGE ACADEMY COURSES

*Transportation can be provided to students who are interested in taking Indian Hills courses or Academy programs.

ADVANCED MANUFACTURING

DC Circuit Analysis

This course covers the electrical and electron theory of direct current and proceeds through units in resistance, conductance, series circuits, parallel circuits, series-parallel circuits, voltage divider circuits, and the proper use of meters.

AC Circuit Analysis

This course covers magnetism and electromagnetic induction and progresses through alternating current and voltage, capacitors, inductors, and transformers. The response of sinusoidal voltages and currents to RL, RC, and RLC circuits is studied, including phasor analysis and filter applications.

Analog Devices

This course covers the application, operation, and theory of solid state devices, such as diodes, transistors, thyristors, and operational amplifiers. Semiconductor characteristics are examined and applied to voltage and power amplifiers, as well as switching circuits.

Power Transfer Technology

This course covers electrical power and fluid-power-transfer technologies. Emphasis will be placed on high voltage alternating current, direct current power supplies, and fluid power concepts and applications. Three-phase power voltage rectification and regulation are included

WELDING

Intro to Welding, Safety and Health

This course will provide students with orientation to the welding profession and will cover the basics of safety & health within the welding profession. This course aligns to SENSE Level 1, Module 1 and Module 2 – Key Indicators 1-6.

Procedures and Qualification

This is a facilitated course designed to make the student aware of proper welding procedures, qualification records, and procedure specifications found in industry. This course helps prepare the student who will become a welding supervisor or inspector.

Welding Inspection and Testing

Students will visually examine test weldments and thermally cut surfaces per multiple welding codes, standards, and specifications. This course aligns to SENSE Level I, Module 9: Welding Inspection and Testing Principles.

Print Reading and Welding Symbol

Provides instruction in interpreting elements of welding prints (drawings or sketches), focusing on measurement, American Welding Society welding symbols, and fabrication requirements. Students will understand how to prepare, assemble and tack welding parts according to drawings or sketches, using proper materials and tools. This course aligns to SENSE Level 1 Module 3: Drawing and Welding Symbol Interpretation, Key Indicators 1 and 2.

Thermal Cutting and Processes

Focuses on proper safety, equipment setup and cutting techniques for manual and mechanized OxyFuel cutting on carbon steel. Students perform American Welding Society compliant cutting operations in the flat position. The student will also perform scarfing and gouging operations to remove base and weld metal in flat and horizontal positions on carbon steel. This course aligns to SENSE Level 1 Module 8 - Units 1 and 2, as well as Module 2 - Key Indicator 7 and Module 9 – Key Indicator 1

Gas Metal Arc Welding Spray Transfer

Focuses on proper weld safety, machine setup and welding techniques of Gas Metal Arc Welding Spray Transfer. Students perform American Welding Society compliant welds on carbon steel in flat and horizontal positions. This course will prepare students to take an AWS welder certification test, which is recommended for its successful completion. It aligns with SENSE Level 1 Module 5 Key Indicators 1, 2 and 8-12, as well as Module 2 - Indicator 7, Module 3- Key Indicator 3, and Module 9 – Key Indicator 2.

Shielded Metal Arc Welding I

Focuses on safety, amperage settings, polarity and the proper selection of electrodes for the shielded metal arc welding process. Students will perform American Welding Society compliant welds on carbon steel, using visual and destructive methods for determining weld quality. This course aligns to SENSE Level 1

Shielded Metal Arc Welding II

Focuses on safety, amperage settings, polarity and the proper selection of electrodes for the Shielded Metal Arc Welding (informally known as stick welding) process. Students perform American Welding Society complaint welds on carbon steel, in vertical up and overhead configurations, using visual and destructive methods for determining weld quality. This course aligns to SENSE Level 1 Module 4: Shielded Metal Arc Welding Key Indicators 1-7 for the flat and horizontal positions, as well as Module 2 - Key Indicator 7, Module 3- Key Indicator 3, and Module 9 – Key Indicator 2.

Gas Metal Arc Welding Short Circuit

Focuses on proper weld safety, machine setup and welding techniques of Gas Metal Arc Welding Short-Circuiting Transfer. Students perform American Welding Society compliant welds on carbon steel, in flat, horizontal, vertical and overhead positions. This course aligns with SENSE Level 1 Module 5 Key Indicators 1-7.

Advanced Welding Procedures II

This is a facilitated course that covers Advanced Shielded Metal Arc Welding (SMAW) preparing the student for structural steel and pipe welding.

FCAW

This is a facilitated course that covers Flux Core Arc Welding (FCAW) techniques and procedures.

Gas Tungsten Arc Welding Austenitic

Focuses on proper weld safety, machine setup and welding techniques for Gas Tungsten Arc Welding. Students perform American Welding Society compliant welds on austenitic stainless steel in flat, horizontal, and vertical positions. This course will prepare students to take an AWS welder certification test, which is recommended for successful completion of this course. This course aligns to SENSE Level I, Module 7 Key Indicators 1, 2 and 8-12 as well as Module 2 - Key Indicator 7, Module 3- Key Indicator 3, and Module 9 – Key Indicator 2.

Metalurgy Fundamentals

This is a facilitated course which covers basic metallurgy, destructive, and non-destructive testing methods which the students will see or possibly use in industry.

Production Welding Procedures

This is a facilitated course which covers Gas Metal Arc Welding Pulse (GMAW-P) in a production environment. This course will prepare students to take an AWS welder certification test, which is recommended.

INDUSTRIAL MAINTENANCE

Fluid systems I

This course covers the basic operation of pumps and valves, drive components, basic hydraulic and pneumatic systems. The selection and proper use of lubricants in drive components is also covered.

Fluid Systems II

This facilitated course covers the maintenance of mechanical and fluid drive systems. Installation and replacement of bearing and shaft seal, tubing and hose systems are also covered.

Fluid Systems III

This course covers in detail the maintenance and troubleshooting of hydraulic and pneumatic systems.

Fluid Systems Analysis

This course covers troubleshooting and routine maintenance of systems covered in Fluid Systems I, II, and III. The basic concepts of Total Productive Maintenance (TPM) are also included.

Mechanical Drives I

This course will teach students the fundamentals of mechanical drives by introducing the student to key fasteners, v-belts, chain drives, spur gear drives and multiple shaft drives in a mechanical drives systems used throughout industry.

Career Development Skills

This course teaches the student the skills required to locate prospective employers and to obtain a position in the chosen field. Topics covered include company and job research, application forms, resumes, letters, telephone techniques, and interviews.

HEALTH SCIENCE

Nutrition

This course surveys normal nutritional needs of individuals throughout the lifespan. Emphasis is placed on identifying the various nutrients and their functions for the maintenance or restoration of health. The protection and preservation of food and community nutritional needs are discussed. Dietary modifications related to specific diseases are introduced.

Medical Terminology

This course offers a study of the basic medical language essential to health occupations careers. Emphasis will be placed on word analysis and construction, definitions, pronunciation, spelling, and standard abbreviations.

Introduction to Psychology

This course provides a broad introduction to the principles of contemporary psychology. The course is based on providing the student with an understanding of the theoretical foundations of psychology, as well as a survey of empirical research dealing with behavior and mental processes.

Pharmacology

This course is designed to provide the student with information essential to planning care for patients receiving medication therapy. Common medications affecting the body systems will be introduced. Principles of basic mathematics used in the calculation of drug dosages will be integrated.

Nursing Essentials I

This course introduces the essential scientific knowledge, technical skills, and communication techniques, as specified by OBRA, to function as an accountable member of the healthcare team. Theory, laboratory practice, and clinical experience will be incorporated to prepare the student to address the biopsychosocial and spiritual needs of patients.

Human Anatomy and Lab

This course covers basic concepts in human anatomical structure in relation to simple body functions. All body systems are covered with emphasis on structure. This course is for students interested in pursuing health or science programs. To succeed in this course, a student should have a strong background in biology.

LANDSCAPE AND TURFGRASS

Principles of Horticulture

This course will provide the student with essential knowledge and skills necessary for a solid orientation in horticulture. Areas of study include climate and plant growth, botanical nomenclature, anatomy, propagation, vegetable gardening, fruit trees, flower and herb gardening.

Turf and Landscape Equipment

This course provides an introduction to the types of equipment used in the turf grass and landscape industry such as tractors, sprayers, mowers, etc. Students will learn to operate equipment safely and gain the concepts of proper maintenance techniques. Tools used to maintain this equipment will also be covered along with a basic parts introduction.

Identifying Plant and Landscape Problems

This course will cover common insect, disease, and weed identification in various landscape applications along with environmental problems. Techniques for problem identification and finding the tools needed to reach a solution will be a major focus. Strategies such as integrated pest management and chemical treatment will be covered.

Outdoor Power Equipment

This course examines the uses of small engines in the turf and landscape industry. Selection, maintenance, and repair are the main foci of this course. Both 2-cycle and 4-cycle operation and repair will be discussed and examined in detail.

Soil and Water Conservation

Emphasis will be on environmental practices as they relate to conservation management of our natural resources. Students will discuss soil erosion, water quality, and soil and water management. Lab work required.