

East Butler High School



Course Descriptions

Updated for the 2019-20 School Year

Agriculture

Introduction to Agriculture, Food & Natural Resources

5 Credits

Grades 9-10

This is a prerequisite course to all Ag class offerings.

The introductory course for the Agriculture, Food and Natural Resources Career Cluster provides a knowledge base and technical skills in all aspects of the industry. Learners will be exposed to a broad range of agriculture, food and natural resources careers, cluster foundation knowledge and skills, introduction to leadership development, the FFA organization and career exploration. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

Crop Management/Agronomy

5 Credits

Grades 10-12

This course investigates advanced crop production and management topics. Students develop an understanding of fertilization methods, resource management, pest management, technology use, marketing, and world hunger. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

Prerequisite: Introduction to Agriculture, Food and Natural Resources

Animal Science

5 Credits

Grade 11-12

A course focusing on the basic scientific principles and processes that are involved in animal physiology, breeding, nutrition, and care in preparation for an animal systems career. Topics include animal diseases, introduction to animal science, animal nutrition, animal science issues, career opportunities and animal evaluation. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

Prerequisite: Introduction to Agriculture, Food and Natural Resources

Large Animal Management

5 Credits

Grades 10-12

This course includes advanced scientific principles and communication skills that build on the knowledge and skills learned in Animal Science. Topics include animal waste management, animal science economics, decision making, global concerns in the industry, genetics, and breeding. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

Prerequisite: Introduction to Agriculture, Food and Natural Resources

Small Animal Management**5 Credits****Grades 10-12**

This course includes advanced scientific principles and communication skills that build on the knowledge and skills learned in Animal Science. Introduces students to the basics of animal care including anatomy, physiology, welfare, nutrition, disease, parasites, housing, grooming, and general animal care. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

***Prerequisite:** Introduction to Agriculture, Food and Natural Resources*

Nursery and Landscape**5 Credits****Grades 10-12**

This course examines the knowledge and skills used to produce and use horticultural plants. Topics include plant identification, fertilization, pest management, soils, and design. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

***Prerequisite:** Introduction to Agriculture, Food and Natural Resources*

Floriculture**5 Credits****Grades 10-12**

Apply principles of design in plant systems to enhance an environment (e.g. floral, forest landscape, and farm). This course examines the knowledge and skills used to produce and use floral plants. Topics include plant identification, fertilization, pest management, soils, and design. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

***Prerequisite:** Introduction to Agriculture, Food and Natural Resources*

Environmental and Natural Resources**5 Credits****Grades 10-12**

A course that provides an opportunity for students to increase awareness of the close ties among living organisms as well as natural and environmental concerns with the interrelationships of living organisms and the world around us. Students are exposed to careers related to natural resources systems. Students also look closely at Nebraska's natural resources and management techniques. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

***Prerequisite:** Introduction to Agriculture, Food and Natural Resources*

Plant Science**5 Credits****Grades 10-12**

Develop and implement a crop management plan for a given production goal that accounts for environmental factors. Utilize resources efficiently and sustainably for crop production. Programs of Study to which this Course applies: This course examines the scientific concepts related to plant systems. Students will consider environmental factors on plant growth. In addition students will examine plant classification, anatomy, physiology, and methods of propagation. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership.

***Prerequisite:** Introduction to Agriculture, Food and Natural Resources*

Veterinary Science

5 Credits

Grades 10-12

Prerequisite: Introduction to Agriculture, Food and Natural Resources

This course includes advanced scientific principles and communication skills that build on the knowledge and skills learned in Animal Science. Introduces students to in depth practices involved with animal medical care. Topics covered include systems of the body, medical equipment identification and uses, medical vocabulary, reproduction, disease, parasites, nutrition, and surgical practices. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

Leadership & Service

5 Credits

CTSO Officers

Instruction provided in a semester long leadership, human resource development, or related careers course includes leadership in a community, leadership concepts/applications, characteristics of an effective leader, characteristics of an effective manager, and a related practicum demonstrating contribution to society. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

Art

Art 1

10 Credits

Grades 9-11

This yearlong class will introduce students to a variety of art ideas and materials through both two-dimensional and three-dimensional art. Basic art techniques and skills in drawing, painting and sculpture will be learned as well as using art elements and principles.

*****Prerequisite for all other art classes. A minimum grade requirement of an 80% is needed to advance within the department.*****

Drawing I

5 Credits

Grades 10-12

This semester long course will teach basic drawing skills using a variety of media, techniques and processes.

Prerequisite: Art 1

Drawing II

5 Credits

Grades 10-12

This semester long course will build on drawing skills with greater emphasis on handling materials, exploring of technique, organization of composition. There will be an emphasis on using compositional design elements to create original works of art.

Prerequisite: Art 1

Painting**5 Credits****Grades 10-12**

This semester long course will teach basic painting skills using a variety of media, techniques and processes. There will be an emphasis on using compositional design elements to create original works of art.

Prerequisite: Art 1

Sculpture**5 Credits****Grades 10-12**

This semester long course will look at a variety of basic ceramic and sculpture materials and processes to create three-dimensional works of art.

Prerequisite: Art 1

Advanced Art**10 Credits****Grade 12**

This yearlong class is for highly motivated art student. This is an in-depth class that will focus on refining two and three-dimensional techniques. There will be an emphasis on using compositional design elements to create original works of art as well as develop a personal style.

Prerequisite: Art 1

Business

Intro to Business**10 Credits****Grades 9-10**

Students develop an understanding of how business affects their everyday lives. They learn about the economic system and its role in business, how private enterprise works, how businesses are organized, how prices are determined and what role the government plays in business.

Accounting 1**10 Credits****Grades 11-12**

Accounting I focuses on forms of business ownership. First year accounting is for students who have a variety of career objectives. Setting up and keeping a set of financial books for each business (Sole Proprietorship, Partnership, and Corporation) is studied. Students will better understand beginning vocational preparation for careers in accounting and careers in related business fields for which mastery of some accounting is needed. College bound students will have a foundation on which to continue study in business and accounting fields. Students will become familiar with computers and how they are used in business, a unit on understanding taxes will also be included where students will learn about form W-4, W-2's, 1040EZ and 1040A tax returns.

Business Communication**5 Credits****Grades 11-12**

Students will cover materials needed to make them successful in today's workplace in the important skill of communication. Students will refine skills in writing, listening, speaking, computing, and research and in the process see how modern technology has changed communication in the workplace.

Business Leadership**5 Credits****Grades 11-12**

Students will equip themselves with the skills needed to be a leader now and in their future careers. Students will also explore a study of ethics in the workplace and will provide case studies to assist them in handling ethical decisions in the workplace environment.

Personal Finance
11-12**5 Credits****Grade**

This course will inform students how individual choices directly influence occupational goals and future earnings potential. Real world topics covered will include income, money management, spending and credit, as well as saving and investing. Students will design personal and household budgets utilizing checking and saving accounts, gain knowledge in finance, debt and credit management, and evaluate and understand insurance and taxes. This course will provide a foundational understanding for making informed personal financial decisions leading to financial independence.

Computer Science

Computer Science Principles**10 Credits****Grades 9-12**

Computer Science Principles introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. More than a traditional introduction to programming, it is a rigorous, engaging, and approachable course that explores many of the foundational ideas of computing so all students understand how these concepts are transforming the world we live in.

Cyber Security**5 Credits****Grades- 10-12**

As our world becomes increasingly dependent on technology, cybersecurity is a topic of growing importance. It is crucial that companies and individuals take precautions to protect themselves from the growing threat of cyber attacks. This course prepares students with crucial skills to be responsible citizens in a digital future.

Digital Design**5 Credits****Grades 10-12**

Digital Media is a course designed to educate students on the ever-changing digital world. The curriculum covers a wide range of areas, so it appeals to a diverse group of students. Topics covered in Digital Media classes include graphic design, animation, audio production, video production. Students will create, design, and produce digital media including sound, video, graphics, and text. Emphasis will be placed on effective use of tools for interactive multimedia production. Striv will also be incorporated into this course.

Web Design**5 Credits****Grades 10-12**

This course is a project-based course that teaches students how to build their own web pages. Students will learn the languages HTML and CSS, and will create their own live homepages to serve as portfolios of their creations. By the end of this course, students will be able to explain how web pages are

developed and viewed on the Internet, analyze and fix errors in existing websites, and create their very own multi-page websites.

English

English 1

10 Credits

Grade 9

Students will have a comprehensive review of grammar, usage, and mechanics. Weekly vocabulary will be assigned. Composition instruction will include journaling, critical analysis, expository, and introduction to the techniques of MLA informative research. Literature units will include the genres of short story, drama, poetry and novel. A speech unit will concentrate on a review of informative speaking.

English 2

10 Credits

Grade 10

This is a year-long class offered to sophomores. The purpose of this class is to review concepts previously taught regarding grammar, mechanics and usage; to review sentences and paragraphs; to expand on the procedure for writing a research paper; and to experiment with different types of writing. Weekly Vocabulary lesson will be assigned.

The students are required to research and write a 3-5 page paper (MLA format) with internal documentation, an outline, and works cited page in addition to various creative writing activities.

Literature units will include the genres of short story, drama, poetry and novel.

English 3

10 Credits

Grade 11

This class is comprised of a main topic per semester. One semester provides students with a chance to explore various concepts of literature through the reading, discussion, and critical analysis of the genres of short story, drama, poetry and novel.

The other semester is used to review the concepts previously taught regarding grammar, mechanics and usage; to review sentences and paragraphs; to expand on the procedure for writing a research paper; and to experiment with different types of writing. The students are required to research and write a 6-8 page paper (APA format) with internal documentation, charts and/or graphs, an outline and reference page in addition to various creative writing activities. Weekly vocabulary lessons will be assigned.

English 4

10 Credits

Grade 12

This is a year-long course offered to seniors. Its purpose is to review the concepts previously taught regarding grammar, mechanics and usage; to review sentences and paragraphs; to expand on the procedures for technical writing; and to experiment with different types of writing. Weekly Vocabulary lessons will be assigned.

The students are required to research and write a 6-8 page paper (APA format) with internal documentation, charts and/or graphs, an outline and reference page in addition to various creative writing activities

The literature part of the course provides the student with a chance to explore various concepts of literature through the reading, discussion, and critical analysis of genres of short story, drama, poetry and novel.

College Prep English
11-12

10 Credits

Grade

Students will have a comprehensive review of grammar, usage, and mechanics. Vocabulary study will be a direct attack concentrating on rapid growth necessary for college studies. Composition instruction will concentrate on personal narrative, expository, essay, critical analysis, and MLA persuasive research writing. Literature studies will include Greek mythology, English epic poetry, and Shakespearean tragedy.

Journalism 1 and 2

10 Credits

Grades 11-12

Journalism is an elective course that is dedicated to writing, editing, photographing and documenting news that is relevant to our student body. The Journalism class is also responsible for helping produce the school yearbook.

Speech

5 Credits

Grade 10

This class is offered each semester at the sophomore level. Its purpose is to provide the student with an opportunity to research, prepare and present speeches. The student prepares and presents an average of 10 speeches a semester, most of which are informative. These speeches range in length from 3-5 minutes to 8-10 minutes.

Family and Consumer Science

FCS 1

10 Credits

Grades 9-10

FCS I is an exploratory unit with time spent covering the topics of relationships, foods, consumerism, childcare, housing and clothing. Emphasis is placed on the foods unit, covering food safety and sanitation. The sewing project includes sewing from a pattern in order to read and follow written directions.

Advanced Clothing

5 Credits

Grades 10-12

Topics covered include: why we wear clothes, the meaning of the clothing, line, style and colors we choose to wear. Time is spent researching fashion designers and the history and possibilities of clothing in the future. Students try their hand at fashion design as they each create a line of clothing. Four sewing projects are completed during the semester, one of which is a quilt block pillow.

Advanced Foods

5 Credits

Grades 10-12

A course which providing students with food and nutrition information that will be used on a daily basis. Advanced Foods focuses on preparation techniques of a variety of foods and on the presentation of food. Foreign foods are also discussed and prepared. Measuring techniques, kitchen equipment and food safety discussed in FCS I is reviewed.

Prerequisite – FCS 1

Child Development

5 Credits

Grades 10-12

Parenting as a choice is emphasized along with the emotional and financial responsibilities that come with parenting. Pregnancy, prenatal care and childbirth are also topics covered in depth. An overnight experience with the 'Real care Dolls' gives the students a chance to explore parenting first hand. The course covers physical, intellectual and social growth from infancy through the preschool years. Students gain hands on experience in the preschool room. Daycare options are studied and students create their own childcare facility as a final project.

Family Relations
11-12

5 Credits

Grade

Emphasis is placed on personal relationships and lifestyles. Topics covered include dating, communication, sex roles, engagement, young marriages, marriage customs, laws and health. The course covers marriage and divorce laws and legal fees incurred with marriage and divorce proceedings. Time is also spent discussing aging, death and dying.

Housing

5 Credits

Grades 10-12

A fun course where students learn about primitive housing, renting vs. buying options, living in each of the main areas of a house, windows, color, design and cost of building a home. Highlights include building three-dimensional primitive homes and drawing a floor plan to scale while including colors, walls and choosing carpet, countertop and paint samples to complete their project.

Nutrition Science

5 Credits

Grades 11-12

Nutrition Science is the study of the complex relationship between the body, nutrients, and health throughout the life cycle. Nutritional science students will investigate the socioeconomic, cultural and community influences on diet. Areas of study will include physical activity, digestion, metabolism, label reading, food safety and sanitation.

Math

Algebra 1

10 Credits

Grade 9

Students will begin the year with an introduction to Algebra where they will learn the concept of the variable. Next, the students learn to work with real numbers and all their properties. Algebra I then teaches the students how to solve one-variable equations, a major concept of algebra. The students also are introduced to polynomials and learn the techniques to factoring polynomials. Algebra also strengthens the students understanding of fractions and their applications. Students get introduced to functions, which allow them to work with systems of linear equations. The students then work with inequalities and with rational and irrational numbers, this prepares the students for geometry.

Geometry**10 Credits****Grades 9-10**

Geometry is a course in which students will develop their ability to construct formal, logical arguments and proofs in geometric settings and problems. Students will also use reasoning skills to solve algebraic problems in geometric settings. Some of the topics covered include definitions, postulates, and theorems regarding angles, segments and lines, arcs, congruent triangles, similar triangles, special quadrilaterals, parallel and perpendicular lines, circles, coordinate geometry, area and volume formulas, transformations, constructions, and right triangle trigonometry.

Prerequisite - Algebra I

Algebra 2**10 Credits****Grades 10-12**

Algebra 2 is a math course in the study of algebraic expressions, equations, inequalities, and functions. This course expands the mathematical content and concepts of Algebra 1 and Geometry. Some of the topics covered include complex numbers, exponents, radicals, matrices, systems of linear equations, functions (absolute value, exponential, logarithmic, quadratic, radical, polynomial, and rational) and their behavior, solving and graphing nonlinear equations, conic sections, combinatorics, probability, basic trigonometry and sequences/series.

Prerequisites – Algebra I and Geometry

Tech Math**5 credits****Grade****11-12**

This course provides the math skills required in career/technical fields. The course includes a review of arithmetic operations, exponents, algebraic operations, and right triangle trigonometry with emphasis placed applications. College credit can be earned through CCC-Columbus.

Prerequisites - Algebra I and Geometry

Math Topics**5 credits****Grade 11**

This course will teach and review concepts that provide the basis of algebra, geometry and statistics, focusing on the ACT Exam that is required for all Juniors in the state of Nebraska. Topics will include, but are not limited to coordinate geometry, similar triangles, trigonometry, area, perimeter, volume, transformations, basic and intermediate algebra, probability, statistical measurement and number sense. Students will be graded on several practice ACT math exams, in addition to topic-specific quizzes geared towards ACT practice. Test taking strategies will also be a focal point of the course. The math section of the ACT taken in April will count as part of the grade of the course.

After the ACT test is taken, students will explore topics often found outside the regular curriculum such as conditional probability, sabermetrics, game theory, expected value, finance-based math and networks.

Prerequisites - Algebra I and Geometry

Pre-Calculus**5 Credits****Grades 11-12**

The first semester of this two-semester course is Advanced Algebra topics. These algebra concepts include linear and quadratic functions, polynomial functions, inequalities, exponents and logarithms, and analytic geometry.

Prerequisites – Algebra II and Geometry

Trigonometry/Probability & Statistics**5 Credits****Grades 11-12**

Students began by looking at the basic trigonometric functions, and then learn about trigonometric equations and applications. The students enhance their knowledge of trigonometry with some triangle trigonometry applications, polar coordinates and complex numbers. The last part of the second semester covers such topics as sequences and series, counting principles, probability and statistics. The students will also participate in a statistics project where they collect data, analyze the data, and then write a report about their project. *Prerequisites - Pre-Calculus*

Calculus**10 Credits****Grade 12**

Calculus is an in-depth study of functions, graphs, limits, derivatives, definite integrals, antiderivatives, and real-world applications of differentiation and antidifferentiation. Students will work with functions graphically, numerically, analytically, and verbally and understand the connections among these representations. Some of the topics covered include limits, continuity, derivatives, applications of derivatives (rates of change, related rates, curve-sketching, optimization), integrals, applications of integrals (area, volumes, differential equations), and techniques of integration. College credit can be earned through CCC-Columbus.

Prerequisites – Pre-Calculus and Trigonometry

College Algebra**10 Credits****Grades 11-12**

The course begins with a review of basic concepts and skills from algebra. Then the course moves on to equations and inequalities followed functions and graphs. These are important to understanding any algebra course and topics. The course then covers operations on functions and analyzing their graphs. This leads to exponential and logarithmic Functions. The students then learn about systems of equations and inequalities. The course ends a study of sequences, series, and probability. College credit can be earned through CCC-Columbus.

Music

High School Band**10 Credits****Grades 9-12**

In this course, the year is divided into marching band and concert band. The first nine weeks may include the preparation of a competition marching show. All aspects of music performance are addressed in addition to marching fundamentals. The remaining three-quarters of the year are dedicated to concert band music. Ear-training, quality tone production, musicality, counting/rhythms, and sight-reading skills are addressed as students prepare songs for a Christmas concert and District Music Contest.

High School Choir**10 Credits****Grades 9-12**

Students will learn to sing using proper breathing and vowel formation. Students will perform songs for the Christmas concert and District Music Contest, as well as having the opportunity to audition for CRC honor choir. A serious interest in music and proper singing is required for this class.

Physical Education

PE 1**10 Credits****Grade 9**

It is at the 9th grade level where coordination of developed skills are directed towards learning activities which would prove useful to the student's leisure time. Most lifetime leisure sports are introduced based on the school's equipment inventory. The program will provide a change of pace from the students' academic routine. Reinforcement of the need to improve one's health and fitness is also part of this course. It is the general goal to promote physical activity and non-sedentary lifestyles.

Health**5 Credits****Grade 10**

This course is designed to develop an appreciation for the importance of wellness. Units of study focus on five main areas:

1. Basic First Aid; 2. Human Sexuality; 3. Disease; 4. Drug Abuse; 5. Mental Health. Coping skills are explored to help the students meet the challenges one must overcome to maintain a healthy lifestyle as society changes.

Lifetime Fitness**5 Credits****Grades 10-12**

Students will engage in a variety of fitness/exercise programs that will promote lifetime fitness. Students will utilize fitness videos and Youtube videos to help them achieve their goals and learn different movements within each program.

Sports Management**5 Credits****Grades 10-12**

Students will engage in a variety of sports specific functions and topics. This will include, but not limited to, setting up and managing Striv equipment, keeping scorebook for baseball/softball, basketball, and volleyball. The last portion of the course will be learning the mechanics and rules of umpiring and reffing baseball and basketball.

Weight Training**5 Credits****Grades 10-12**

This class offers the opportunity for students to participate in strenuous exercise. Four days each week students will alternate between upper and lower body lifting stations to develop strength. The fifth day each week students will perform agility activities.

Science

General Science

10 Credits

Grade 9

General Science is a course that will study energy and matter. Students are introduced to various laws and principles of physics. There are many hands-on and computer simulation labs and activities for the students to work through. Units of study include: measurements, atomic structure, compounds, force and energy, work and machines, laws of motion, heat, electricity, magnetism, and waves and sound. Three days are spent on lab safety.

Biology

10 Credits

Grade 10

Students will study major areas of biology, including: lab safety, microscopes, characteristics of living things, cell structure and functions, cell energy, cell growth, cancer, classification of life, ecology, evolution, the origin of life, genetics, and the history of life on the planet.

Applied Chemistry

10 Credits

Grade 11

Students will study the interactions of matter as it relates to more real world topics. Air bags, glowing things, antacids, and soap will be discussed.

Chemistry

10 Credits

Grade 11

Chemistry is the study of the interactions of matter. Students will study the following topics: matter, atoms, compounds, chemical reactions, chemical equations, and acids and bases. Some algebra level math will be required.

Anatomy & Physiology

10 Credits

Grades 11-12

This is a course in Anatomy and Physiology of the human body. The class begins with basic terminology. Body systems studied include: integumentary system, skeletal system, muscular system, nervous system, respiratory system, digestive system, immune system, cardiovascular system, excretory system and reproductive system. The student will perform a fetal pig dissection, allowing them to study various body systems. Through each system a discussion of diseases and disorders related to each system are covered. Three days are spent on lab safety.

Physics

10 Credits

Grade 12

Physics is the study of forces and motion. Students will plan and carry out independent investigations along with normal class work. Topics include motion, acceleration, forces, gravity, projectiles, momentum, work, and energy.

Medical Terminology**5 Credits****Grades 11-12**

Medical Terminology is a class geared to any student interested in pursuing a health related career. The class focuses on definition, spelling, and pronunciation of medical terminology. Vocabulary is organized by topic and body system in a word-building format of prefixes, root words, and suffixes. Ten chapters will be covered.

Science Applications**5 Credits****Grades 11-12**

The class will study the principles of science that are used when different devices perform their tasks, for example, how a television receives a signal and converts the signal to a picture. Coursework studied will cover all branches of science. Topics investigated may include genetics, astronomy, ecology, sound, medicine innovations and other current science technological advances. Projects, labs, lecture and media will be used to investigate the topics.

Academic Decathlon**5 Credits****Grade 9-12**

Academic Decathlon is a preparatory class for the Academic Decathlon competition. Curriculum areas include Art, Economics, Literature, Music, Math, Science, and Social Science. The specific course topic is determined by the US Academic Decathlon in the spring, past topics include India, World War II, the European Renaissance, and Energy. Students will compete in the regional Academic Decathlon competition in January.

Skilled & Technical Sciences

Intro to STS**5 Credits****Grades 9-10**

Students will spend nine weeks working in each of the following areas: drafting, woodworking, metalworking, basic electricity robotics. Each area will be explored at an introductory level with emphasis on practical application of technical information. This course is a prerequisite for other Industrial Technology classes and will give a good foundation to build upon for the other courses.

Construction 1**5 Credits****Grades 10-12**

This is a beginning machine woodworking class designed to teach the basic uses of the various stationary woodworking machines and power hand tools. Students will be introduced to the uses of various wood products, their properties and manufacturing techniques. Proper operation and safety procedures are stressed as students develop plans for and manufacture a series of wood projects. Students will complete a series of projects. This course will be offered every year.

Prerequisite: Intro to Skills and Trade

Construction 2**5 Credits****Grades 10-12**

In this hands-on focused light construction course, students will prepare for a career in the skilled trades. Through actual planning and building, this class will design and construct a small structure. Topics covered include: job site safety, drafting, construction codes and fundamentals.

Drafting**5 Credits****Grades 10-12**

This course explores in detail several advanced concepts aimed at increasing drawing efficiency. The student explores advanced and customizable features of the Auto Inventor CAD software to build an efficient, integrated, customized CAD environment. Students will use CAD software to generate 3D printed projects.

Advance Drafting**5 Credits****Grades 10-12**

This course introduces the students to the drafting profession and its application as it applies to the world of civil engineering and architectural design. Lab drafting is accomplished using Revit in a state of the art computer lab. Students will produce a working drawing set and a solid assembled model.

Autos 1**5 Credits****Grades 10-12**

This program gives the student a broad exposure to many different technologies, high-tech tools of technology, and technological concepts. The lab is designed to develop problem-solving, critical-thinking, research, and documentation skills. Students will complete the tear down of a basic small engine. This course prepares students for further study in the area of Industrial Technology.

Autos 2**5 Credits****Grades 10-12**

This class provides the student with the basic knowledge and understanding of the automotive field. This course is designed for the student interested in Automotive/Transportation Technology and the automotive hobbyist. The course covers safety in the lab, theory of operations, construction, maintenance, repair and adjustments of automotive components, the history and impact of transportation on society, and changing trends in transportation technology.

Basic Robotics**5 Credits****Grades 10-12**

Basic Robotic is for students who are interested in the design, engineering and programming of robots or another technical career. The Robotics Engineering course is designed to explore the past, current and future use of automation technology in industry and everyday use. Robotic Engineering focuses heavily on prior knowledge from Intro to Skills and trades. The students will receive a comprehensive overview of robotic systems and the subsystems that comprise them. There will be class competitions and engineering challenges using the radio controlled TETRIX robotic system,

Advanced Robotics**5 Credits****Grades 10-12**

This course brings together the study of electronics, microprocessors (computer-on-a-chip), computer programming, robot sensors and actuators, and robotic electromechanical systems. Throughout the course, students will be posed with different tasks in which they will design and create projects to solve these tasks. They will learn how to combine and apply the study of electronics, programming and actual mechanics into one working machine. There will be class competitions and engineering challenges using the radio controlled TETRIX robotic system.

Basic Welding

5 Credits

Grades 10-12

(Class size is limited to 12)

This course is designed to introduce student to the basics of Oxy-Acetylene and Arc Welding techniques. Safety procedures, along with related welding tools and equipment are also stressed. Students produces practice welds and projects using the above list of welding procedures.

Metal Fabrication

5 Credits

Grades 10-12

(Class size is limited to 12)

Welding focuses on the use of the MIG welding process and plasma cutting. Students learn safety topics pertaining to each welding process and spend time in the shop perfecting their welding abilities. Students also complete various metal projects while in the class.

Social Studies

World History

10 Credits

Grade 9

Freshmen study selected units covering the 19th through 21st centuries. Major themes covered include: the Age of Revolution, Imperialism, World War I, Global Depression and the rise of Fascism, World War II, the Cold War, Independence Movements and Global Interdependence. The foundation of materials is from the textbook, supplemented by research and outside sources.

American History 10

10 Credits

Grade 10

Sophomore students study the history of America from prehistory through the Civil War period. Supplementing the textbook are videotapes and DVD's, outside readings, documentary sources, and research projects.

American History 11

10 Credits

Grade 11

Junior students continue the study of the history of America from the Civil War Era through modern times. Supplementing the textbook are videotapes and DVDs, outside readings, documentary sources, and research projects.

Government

5 Credits

Grade 12

Senior students study the American system of government from its early roots in Greece and Rome to modern times. An in depth study of the Constitution, the three branches of government, federalism, Civil Liberties, the election process, state and local government, and current events give students a critical perspective of our society and how it works.

Economics**5 Credits****Grade 12**

Description Analysis of competitive and non-competitive markets, including the behavior of producers and consumers. Topics include price and income elasticity, income distribution, production costs, resource allocation, comparative advantage and current economic problems. Optional college credit through Central Community College is available. This course is a college sophomore level course, and meets General Education requirements in the Social/Behavioral Sciences as well as in the Business Programs. In addition, the course transfers to most baccalaureate institutions. (A student should check with the institution to which he or she plans to transfer for the exact transfer status in the student's field of study.)

Psychology**5 Credits****Grades 11-12**

Psychology is a survey course that offers high school students appropriate content that illustrates current and classical theories in different Psychology topics. Activities, demonstrations, and current events will supplement the textbook.

Sociology**5 Credits****Grades 11-12**

Sociology is the study of the structure, functions, and various forms of human society. Activities, demonstrations, and current events will supplement the textbook.

Career Exploration**5 Credits****Grades 11-12**

Students will explore their strengths and skills using images and stories that lead to small group conversations and an interactive learning experiences.

Spanish

Spanish 1**10 Credits****Grades 9-12**

During their first year of Spanish, students will learn the basics of the Spanish language and focus on themselves and their immediate surroundings. This includes basic vocabulary, present tense verbs, and basic conversational skills. Students will be able to introduce themselves, talk about likes and dislikes, talk about school, and complete other practical applications of the Spanish language. Spanish 1 is mainly taught through storytelling and authentic Spanish resources when appropriate.

Spanish 2**10 Credits****Grades 10-12**

During their second year of Spanish, students will continue developing their use of the Spanish language while maintaining a focus on the local community. Second year Spanish focuses on increasing vocabulary as well as incorporating different tenses and topics to increase the students' Spanish abilities. Spanish 2 is taught through a combination of storytelling and an increasing amount of authentic resources.

Prerequisites – Spanish I

Spanish 3

10 Credits

Grades 11-12

During their third year of Spanish, students continue to practice using various tenses to describe the world around them. These students will begin to expand their vocabulary and abilities to describe worldwide situations. Spanish 3 transitions to using mostly authentic resources for learning including novels, poems, short stories, music, and videos.

Prerequisites – Spanish I & II

Spanish 4

10 Credits

Grade 12

Advanced Placement Spanish has replaced Spanish 4. The Advanced Placement (AP) Spanish Language and Culture course is designed to meet requirements similar to a collegiate level Spanish course. AP Spanish is taught primarily in Spanish with extensive use of authentic materials. Students will continue to develop their reading, writing, listening, and speaking skills through use of novels, videos, music, and other authentic resources meant for Spanish speakers. At the end of the course, students will have the option to take the AP Spanish test which can be worth 2-4 classes of credit at participating colleges.

Prerequisites – Spanish I, II, III, and teacher approval