# CENTERVILLE VIRTUAL LEARNING ACADEMY



## This document is subject to change.

## Math

### Pre-Algebra A/B (Full Year 2 Credits)

Grade 9-10-11

Pre-Algebra is designed to identify and fill gaps in previous knowledge and algebraic reasoning. Content includes work with ratios and proportional reasoning, understanding, and solving numeric and algebraic expressions, and understanding and solving algebraic equations and inequalities.

## Algebra 1 A (1 Semester 1 Credit)

Grade 9-10-11-12

Algebra 1, Semester A, is a single-semester course designed to build, develop, and periodically assess your subject-matter knowledge while strengthening your mathematical skills. Linear relationships are the main focus of this course. You will graph, create, and solve linear equations and apply function notation to describe linear relationships. You will also study linear transformations and represent linear data using scatter plots and mathematical models. You will write and solve systems of linear equations and inequalities. At the end of this course, you will represent, compare, and analyze datasets in a variety of contexts.

### Algebra 1 B (1 Semester 1 Credit)

Grade 9-10-11-12

Algebra 1, Semester B, is a single-semester course designed to build, develop, and periodically assess your subject-matter knowledge while strengthening your mathematical skills. The major topics of this semester are quadratic and exponential relationships. You will learn to perform operations on polynomials and factor them. You will examine quadratic relationships in detail by writing and graphing quadratic equations. You will also model real-world situations with quadratic functions and solve quadratic equations using a variety of methods. You will investigate exponential relationships and apply exponential models to describe and make predictions about real-world situations. You will solve linear-quadratic and linear-exponential functions. At the end of the semester, you will compare different function types graphically and algebraically.

## Algebra 2 A (1 Semester 1 Credit)

Grade 10-11-12

Prerequisites: Algebra 1, Geometry

Algebra 2, Semester A, is a single-semester course designed to cultivate and periodically assess your subject-matter knowledge while strengthening your mathematical skills. You will begin building a solid foundation for the course by focusing on understanding how expressions and functions can model relationships. The course has a concentrated focus on polynomial, radical, and rational functions, so you will expand your arithmetic skills to include polynomial, radical, and rational expressions and equations. You will analyze the key features with tables, graphs, and equations when they are in function form. With consistent application of these functions throughout the course, you will understand how they can model relationships and solve real-world problems, often utilizing technology.

# Algebra 2 B (1 Semester 1 Credit) Prerequisites: Algebra I, Geometry

Grade 10-11-12

Algebra 2, Semester B, is a single-semester course designed to cultivate and periodically assess your subject-matter knowledge while strengthening your mathematical skills. You will begin by studying exponential and logarithmic equations and functions, discovering relationships and ways these function types can model real-world situations.

Expanding on your knowledge of functions, you will study how arithmetic and geometric sequences can be used to solve problems. You will also learn about piecewise functions and their key features, and closely compare the key features of different function types. This course includes lessons that focus on trigonometric functions and their features, emphasizing transformations and modeling phenomena. Finally, you will build your understanding of the key concepts of statistics and probability to investigate sampling techniques and make inferences from data.

#### **Consumer Mathematics (1 Semester 1 Credit)**

Grade 9-10-11-12

Consumer Math is a single-semester course. In this course, you will learn practical applications of math. You will learn how to plan a budget, manage bank accounts, and figure out the cost of a good or service. You will also learn about taxes, payroll deductions, and how to invest and borrow money. This course will help you make informed decisions about buying or renting a home or car and teach you how to protect your purchases and investments with insurance. Finally, you will study economics, or the science of the creation, distribution, and consumption of goods and services. You'll see how economics affects you as an individual and how it affects the country as a whole.

#### Financial Mathematics A (1 Semester 1 Credit)

Grade 9-10-11-12

Financial Mathematics, Semester A, is a single-semester course designed to introduce you to the basics of financial algebra. This course includes lessons that focus on planning for expenses and developing financial goals. You'll learn to use algebraic expressions that model growth that's due to interest. You'll also describe investments in terms of their cost, risks, and returns.

#### Financial Mathematics B (1 Semester 1 Credit)

Grade 9-10-11-12

Financial Mathematics, Semester B, is a single-semester course designed to provide insight into some advanced concepts of financial algebra. In this course, you'll see how businesses achieve profits through proper financial planning. You'll examine the benefits and consequences of using credit cards and taking out loans. You'll also describe the procedures for filing taxes and identify taxes levied on various investments.

## Geometry A (1 Semester 1 Credit)

Grade 9-10-11-12

Prerequisites: Algebra 1

Geometry, Semester A, is a single-semester course. Geometry is a branch of mathematics that uses logic and formal thinking to establish relationships among points, lines, angles, plane figures, and solids, and to define their properties. In Geometry, Semester A, you will explore the foundations of geometry, coordinate geometry, and rigid and non-rigid transformations of figures in the coordinate plane, using them to establish congruence and similarity of polygons. You will investigate and prove theorems about lines, angles, triangles, parallelograms, and other polygons and build geometric constructions using both basic tools and technology.

#### Geometry B (1 Semester 1 Credit)

Grade 9-10-11-12

Prerequisites: Algebra 1

Geometry, Semester B, is a single-semester course. Geometry is a branch of mathematics that uses logic and formal thinking to establish relationships among points, lines, angles, plane figures, and solids, as well as define their properties. In Geometry, Semester B, you will explore right triangles, trigonometry, and properties of circles and apply geometric concepts to probability. You will also investigate and measure the surface area and volume of geometric solids, applying what you learn to model and solve real-world problems.

#### Pre-Calculus A (1 Semester 1 Credit)

**Grade 11-12** 

Prerequisites: Algebra II

Precalculus, Semester A, is a single-semester course. Studying higher algebra and trigonometry leads to a better understanding of calculus. In Precalculus A, you will explore and build your knowledge of inverse, trigonometric, and logarithmic functions; trigonometric identities; complex numbers; and vectors. You will also apply this knowledge to real-world situations.

#### Precalculus B (1 Semester 1 Credit)

Grade 11-12

Prerequisites: Algebra II

Precalculus, Semester B, is a single-semester course. Precalculus encompasses the rudiments of calculus, analytical geometry, and trigonometry. In Precalculus B, you will explore and build your knowledge of conic sections, matrices,

sequences, induction, and probability and apply this knowledge to real-world situations. You will also study basic concepts of calculus, such as the limits of a function and the area under the curve.

#### **Probability & Statistics (1 Semester 1 Credit)**

**Grade 11-12** 

Probability and Statistics is a single-semester course. This course is designed for students in grades 11 and 12. In this course, you will represent and interpret data using dot plots, histograms, box plots, two-way frequency tables, and scatter plots. You will study normal distributions and distinguish between correlation and causation. You will also determine the conditional probability of two events or whether the events are independent. Using counting techniques and the rules of probability, you will calculate probabilities and use the results to make educated and fair decisions. You will evaluate several data collection techniques and statistical models, including simulations. The course closes with information on how you can use probability models to represent situations arising in everyday life that involve both payoff and risk.

#### Advanced Calculus A/B (Full Year 2 Credits)

Grade 12

The course is split into two semesters. The first semester focuses on the concepts of functions, limits, and differentiation and their applications. The second semester builds off the first semester to focus on integrations. It will cover topics such as the definite and indefinite integral and their applications, inverse function, and techniques for integrating.

## **English Language Arts**

### English 9 A (1 Semester 1 Credit) (Required)

Grade 9-10-11-12

English 9, Semester A, is a single-semester course designed to cultivate reading comprehension and writing skills. In this course, you will read and analyze literature in several different genres. In addition, you will explore many types of writing, such as creative, descriptive, expository, narrative, and persuasive. Dramatic conventions and the structural elements of poetry are also a focus of this course. You will sharpen your writing skills as you evaluate literary works and informational texts by examining formal techniques, form, and writing structures.

#### English 9 B (1 Semester 1 Credit) (Required)

Grade 9-10-11-12

English 9, Semester B, is a single-semester course designed to cultivate your presentation, research, and analytical writing skills. In this course, you will read and analyze literature from several different genres, as well as argumentative texts and informational texts. As you read, you will examine the author's purpose, audience, and point of view. In this course, you will build your research skills by evaluating sources for credibility and bias, developing a research plan, and writing a research paper. An important aspect of the research process will be synthesizing information and correctly citing research sources. This course will prepare you to give a presentation based on your research. Throughout this course, you will sharpen your reading and writing skills.

#### English 10 A (1 Semester 1 Credit) (Required)

Grade 10-11-12

English/Language Arts is the study of language through the interpretation and analysis of texts. You will use the techniques you discover in authentic texts to improve your skills as an author. In English 10, Semester A, you will closely read classic, modern, and world literature to explore themes, literary elements, and word choice. By reading a variety of informational texts, you will analyze the development of central ideas through structure and vocabulary. Throughout the course, you will compose your texts and brief analyses to demonstrate your learning.

#### English 10 B (1 Semester 1 Credit) (Required)

Grade 10-11-12

English/Language Arts is the study of language through the interpretation and analysis of texts. You will use the techniques you discover in authentic texts to improve your skills as an author. In English 10, Semester B, you will closely read classic, modern, and world literature to explore themes through characterization and the structure of literary texts, including Shakespeare. You will closely read seminal documents to understand how authors develop an effective argument. In the culminating unit, you will use all the skills you have learned in this course to write your research paper from the texts you select.

#### English 11 A (1 Semester 1 Credit) (Required)

**Grade 11-12** 

English/Language Arts is the study of the creation and analysis of literature written in the English language. In English 11, Semester A, you will study a variety of techniques to improve your reading comprehension and writing skills. The instruction covers many types of writing: creative, descriptive, expository, narrative, and persuasive. In this course,

you will read and analyze different genres in literature with an emphasis on American literary movements over time. You will also complete writing activities to evaluate literary works with regard to literary techniques, form, and theme.

#### English 11 B (1 Semester 1 Credit) (Required)

Grade 11-1:

English/Language Arts is the study of the creation and analysis of literature written in the English language. In English 11, Semester B, you will study a variety of techniques to improve your reading comprehension and writing skills. The instruction covers several types of writing, including creative, descriptive, and narrative. In this course, you will read and analyze a variety of literary genres with an emphasis on modern American literature and its literary movements. You will also complete writing activities to evaluate various literary works with regard to literary techniques, form, and theme.

#### English 12 A (1 Semester 1 Credit)

Grade 12

English/Language Arts is the study of the creation and analysis of literature written in the English language. In English 12, Semester A, you will explore the relationship between British history and literature from the Anglo-Saxon period through the neoclassical era, including the works of Shakespeare. You will read and analyze a variety of literary works from this period by using relevant cultural and political history presented in each lesson. In this course, you will also study a variety of techniques to improve your reading comprehension, writing skills, and grammar and mechanics. The instruction covers many types of writing: creative, descriptive, expository, narrative, and persuasive. In addition, you will complete writing activities using your analytical and persuasive skills.

#### English 12 B (1 Semester 1 Credit)

Grade 12

English/Language Arts is the study of the creation and analysis of literature written in the English language. In English 12, Semester B, you will explore the relationship between British history and literature from the romantic period to the modern era. You will read and analyze a variety of literary works from this time in the context of relevant cultural and political history. In this course, you will also study a variety of techniques to improve your reading comprehension, writing skills, and grammar and mechanics. The instruction covers many types of writing: creative, descriptive, expository, narrative, and persuasive. In addition, you will complete writing activities using your analytical and persuasive skills.

#### **Creative Writing (1 Semester 1 Credit)**

**Grade 11-12** 

For many hundreds of years, literature has been one of the most important human art forms. It allows us to give voice to our emotions, create imaginary worlds, express ideas, and escape the confines of material reality. Through creative writing, we can come to understand ourselves and our world a little bit better. This course provides students with a solid grounding in the writing process, from finding inspiration to building a basic story to using complicated literary techniques and creating strange hybrid forms of poetic prose and prose poetry. By the end of this course, students will learn how to discover their creative thoughts and turn those ideas into fully realized pieces of creative writing.

#### Gothic Literature: Monster Stories (1 Semester 1 Credit)

Grade 11-12

It was a dark and stormy night, and the vampires, ghouls, and undead were on the prowl... Gothic Literature is riddled with the spooky, but did you know that this genre is so much more than a scary form of entertainment? In Gothic Literature, you'll learn about how some of the world's greatest authors from the 19th century through today used Gothic elements to tackle issues that needed serious attention: the class system, gender norms, racism, social injustice, and more! Grab your monster gear and explore why Gothic literature has retained its appeal even with today's audiences.

## Mythology and Folklore: Legendary Tales (1 Semester 1 Credit)

**Grade 11-12** 

Since the beginning of time, people have gathered around fires to tell stories of angry gods, harrowing journeys, cunning animals, horrible beasts, and the mighty heroes who vanquished them. Mythology and folklore have provided a way for these colorful stories to spring to life for thousands of years and helped humans make sense of the world. Explore how these compelling tales continue to shape society even today.

#### Structure of Writing (1 Semester 1 Credit)

**Grade 11-12** 

Structure of Writing is the study of principles of grammar and effective writing and the application of these principles to writing. In Structure of Writing, you will learn about the types of sentences, punctuation marks, and grammar rules

such as subject-verb agreement and tenses; you will also learn about different parts of speech and their correct usage; examine the concept of parallel structure in sentences as well as identify and correct run-on sentences. Finally, you will learn about developing paragraphs and essays.

Indian Hills Community College Comp. 1 (1 Semester 1 Credit) Indian Hills Community College Comp. 2 (1 Semester 1 Credit) Indian Hills Community College Public Speaking

Indian Hills Community College Fundamentals of Oral Communication

Grade 12

Grade 12

### Science

#### Physical Science A (1 Semester 1 Credit) (Required)

Grade 9-10-11-12

Science is the study of the natural world. It relies on experimentation and evidence to describe the natural events that occur around us. Physical science is the study of matter and energy. In Physical Science A, you'll describe the atomic and molecular structure of substances using models. You will investigate how chemical reactions involve energy and lead to changes in the properties of substances. You'll also model different kinds of forces and the effect they have on the motion of objects. You'll solve problems involving work and power and apply these principles to simple machines. Finally, you will see how simple machines make up more complex machines that are important in our lives.

#### Physical Science B (1 Semester 1 Credit) (Required)

Grade 9-10-11-12

Science is the study of the natural world. It relies on experimentation and evidence to describe the natural events that occur around us. Physical science is the study of matter and energy. In Physical Science B, you'll investigate gravitational, electric, and magnetic force fields and identify factors that determine their strength. You'll apply concepts of electricity and magnetism to explain how motors, generators, and electromagnets work. You will discuss energy transformations in objects and systems, including how heat flows between objects that are at different temperatures. You will model how sound and light travel as waves and how they interact with different forms of matter. Finally, you'll explore how electromagnetic waves help us communicate with one another and collect information about the universe.

## Biology with Virtual Labs A (1 Semester 1 Credit) (Required)

Grade 10-11-12

Biology with Virtual Labs, Semester A, is a single-semester course designed to strengthen your knowledge of basic biology. The first unit provides an introduction to biology and biochemistry. It focuses on the roles of and differences between plant and animal cells. In the second unit, you'll learn about the functions of different organ systems. The third unit covers cell division and the role of DNA and chromosomes in passing traits from parents to offspring. You will also have the option to learn more about biology through augmented reality and the use of the Edmentum AR Biology app on your mobile device.

#### Biology with Virtual Labs B (1 Semester 1 Credit) (Required)

Grade 10-11-12

Biology with Virtual Labs, Semester B, is a single-semester course designed to strengthen your knowledge of biology concepts. The first unit focuses on the classification, characteristics, and biological processes of living organisms. In the second unit, you'll study evolutionary mechanisms and the impact of environmental factors on species over time. The third unit focuses on the conservation of energy as it relates to living things and different ecosystems. In the last unit, you'll explore how different ecosystems are interdependent. You will also have the option to learn more about biology through augmented reality and the use of the Edmentum AR Biology app on your mobile device.

## Chemistry A (1 Semester 1 Credit) Prerequisite: C or Better in Algebra I

**Grade 11-12** 

Chemistry is the study of matter and how it changes. This course looks at matter's composition, properties, and transformations. This semester, you'll explore the structure and properties of matter. You'll analyze and construct the periodic table of elements. You'll compare elements based on their atomic structures and relative positions in the periodic table. You will also discuss the chemical bonding taking place in ionic and covalent compounds and metals. Finally, you'll predict the outcome of chemical reactions based on the reactants involved.

Chemistry B (1 Semester 1 Credit) Prerequisite: C or Better in Algebra I Grade 11-12

Chemistry is the study of matter and how it changes. The course looks at matter's composition, properties, and transformations. In this semester, you will calculate the theoretical quantities of substances involved in a chemical reaction through the study of stoichiometry. You'll analyze chemical reactions that involve aqueous solutions, acids and bases, and gasses. You'll see how gasses respond to changes in pressure, volume, temperature, and quantity through the ideal gas law. You'll also calculate changes in temperature caused by physical and chemical processes and analyze reactions in terms of bond energies. Finally, you will understand how atoms are changed by the unique processes of radioactive decay, nuclear fusion, and nuclear fission.

#### Physics A (1 Semester 1 Credit)

Grade 11-12

### Prerequisites: Algebra II and successful completion or concurrently taking Pre-Calculus

In Physics A, you will learn about the "basics" of physics: how to describe and analyze motion, how forces interact with matter, and how to further describe these interactions with the aid of the concepts of energy and momentum. Finally, you'll explore one more specialized topic, thermodynamics, the physics of heat.

#### Physics B (1 Semester 1 Credit)

**Grade 11-12** 

#### Prerequisites: Algebra II and successful completion or concurrently taking Pre-Calculus

In Physics B, you will use your physical understanding of motion, forces, and energy and apply that knowledge to some important, specialized topics in physics: the behavior of waves, applications of wave theory to light and optics, the interaction of electrical and magnetic forces, and the special "non-Newtonian" properties of energy and matter described by quantum theory.

### Anatomy (1 Semester 1 Credit)

**Grade 11-12** 

Prerequisites: Satisfactory Completion (B+ or Better) of Biology. Chemistry can be taken concurrently. In this course, students will explore the anatomy or structure of the human body. In addition to learning anatomical terminology, students will study the main systems of the body- including integumentary, skeletal, muscular, circulatory, respiratory, digestive, reproductive, and nervous systems. In addition to identifying the bones, muscles, and organs, students will study the structure of cells and tissues within the body.

## Environmental Science A(1 Semester 1 Credit)

**Grade 11-12** 

Prerequisites: Biology

This one-semester course is intended to introduce you to the concepts and processes of environmental science. This course has 13 lessons organized into four units, plus four Unit Activities. Each lesson contains one or more Lesson Activities. In Environmental Science, Semester A, you will learn about the importance of environmental science as an interdisciplinary field. You will describe the abiotic and biotic factors of an ecosystem. You will describe the importance of biodiversity for the survival of organisms and the importance of the food chain and the food web in the ecosystem. You will learn about ecological interactions and succession. You will describe the effects of climate change and different types of adaptation. Further, you will describe the steps of the water cycle, and how the carbon, oxygen, nitrogen, and phosphorus cycle in the global environment.

## Environmental Science B (1 Semester 1 Credit)

Grade 11-12

Prerequisites: Biology

Course Overview This one-semester course is intended to introduce you to the concepts and processes of environmental science. This course has 14 lessons organized into four units, plus four Unit Activities. Each lesson contains one or more Lesson Activities. In Environmental Science, Semester B, you will learn about the factors that affect populations. You will describe human population growth and its implications. You will describe the factors that lead to the unequal distribution of natural resources on Earth. You will explain waste management. You will describe different forms of pollution and ways to control pollution. You will describe various nonrenewable and renewable energy sources. Further, you will learn about the benefits of environmental policies and identify factors that affect sustainable development.

## **Social Studies**

#### US History I (1 Semester 1 Credit) (Required)

Grade 9-10-11-12

This US History course promotes the examination, analysis, and evaluation of important events in the history of the United States of America. In Semester A, you will examine events that shaped the birth, growth, and expansion of the nation from the late 1700s through the mid1900s. These events are told through multiple diverse perspectives and

include a focus on primary and secondary sources. Throughout the course, you will use inquiry skills to examine, ask questions, and analyze the impacts of historical events and actions, and will discuss their outcomes of them with your peers. You will also form opinions about historical events and support your opinions with information from your reading. Not only will you learn about history, but you will also learn critical thinking and analytical skills through Clarifying Big Ideas lessons to gain a deeper understanding of history.

#### US History II (1 Semester 1 Credit) (Required)

Grade 9-10-11-12

This US History course promotes the examination, analysis, and evaluation of important events in the history of the United States of America. In Semester B, you will examine events that impacted America—from the Cold War to the Civil Rights Movement through the War on Terror. These events are told through a variety of viewpoints and primary and secondary sources. Throughout the course, you will use inquiry to examine and analyze the impacts of events and actions. You will discuss the outcomes with your peers. You will also form opinions about events and support your opinions with facts that you learned.

#### World History I (1 Semester 1 Credit) (Required)

Grade 10-11-12

In World History, Semester A, you'll explore major historical events around the world. In the first unit, you'll develop your historical thinking skills. In the second unit, you'll examine the origins and developments of European exploration. In the third unit, you'll learn about the causes and effects of the Renaissance and the Reformation. In the fourth unit, you'll explore revolutions that occurred from 1789 to 1848, including the Scientific Revolution, the American Revolution, and the French Revolution. In the fifth unit, you'll explore the causes and effects of the Industrial Revolution, the spread of nationalism in Europe, and the Russian Revolution.

### World History II (1 Semester 1 Credit)

Grade 10-11-12

In World History, Semester B, you'll explore major historical events around the world. In the first unit, you'll analyze imperialism in the late nineteenth and early twentieth centuries and examine the causes and consequences of World War I. In the second unit, you'll study World War II, analyzing the factors that started the war and its impact of the war. In the third unit, you'll explore the rise and fall of communism in the Soviet Union and China and learn about the Cold War between the United States and the Soviet Union. In the fourth unit, you'll analyze the effects of decolonization in Southeast Asia and Africa. You'll also study the modernization of China and the rise of nationalism in the Middle East. In the last unit, you'll explore economic globalization and evaluate the benefits and challenges of living in the modern world.

## World Religions: Exploring Diversity (1 Semester 1 Credit)

Grade10-11-12

Throughout the ages, religions from around the world have shaped the political, social, and cultural aspects of societies. This course focuses on the major religions that have played a role in human history, including Buddhism, Christianity, Confucianism, Hinduism, Islam, Judaism, Shintoism, and Taoism. Students will trace the major developments in these religions and explore their relationships with social institutions and culture. The course will also discuss some of the similarities and differences among the major religions and examine the connections and influences they have.

## World Geography A/B (1 Semester or Full year 1-2 Credits)

Grade 10-11-12

Geography is the study of where things are in the world. It is important to know why people settled where they did: sometimes this is for weather-related reasons, and sometimes it's because of bountiful natural resources nearby. In this course, you will learn about these special features which drive economic development and form the locales where people settle.

## **Economics (1 Semester 1 Credit) (Required)**

Grade 10-11-12

Economics is a social science that examines how goods and services are created, consumed, and exchanged. This course covers basic economic problems such as scarcity, choice, and effective use of resources. It also covers topics on a larger scale such as market structures and international trade. It particularly focuses on the US economy and analyzes the role of the government and the Federal Reserve System.

## U.S. Government (1 Semester 1 Credit) (Required)

**Grade 11-12** 

The US Government is the study of the founding principles of democracy in the United States, the structures and details of how the government functions, and the role of the individual citizen in participating in that democracy. In US

Government, you will learn about the principles and events that led to the founding of the United States in the eighteenth century; examine how the operations of the US government are spread among three branches of government and distributed between the national, state, and federal levels of government; explore the role of the individual citizen in the operations of the government; and, finally, apply these concepts to understanding the concrete areas of foreign, domestic, and economic policy. You'll explore timelines to gain an understanding of how events link to each other and to the structures of government that exist today, and you'll analyze historical documents for a firsthand sense of how government structures were designed. You'll also gather evidence from relevant documents and historical texts to develop credible explanations of how and why the government exists as it does. You'll then use that evidence to express viewpoints on the operations of government by writing essays and creating presentations about topics of relevance to modern US citizens.

#### Financial Literacy (Required) (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

Financial literacy course is designed to alert, inform, and educate students on concepts of personal finance and money management. Students will begin to develop the skills and strategies that promote personal and financial responsibility related to financial planning, savings, investment, and charitable giving in the global economy. This course will start students on a path toward being in control of their financial futures. Five broad topics will be the foundation of the course: college and career planning, money management, savings and investing, and income and spending. The course will teach students to search and assess college and career opportunities, identify and prioritize their personal money management goals, develop personal spending and savings plans, comprehend the impact of time on the value of money, understand the cost of using credit, and protect assets.

Must choose one or both of the courses below. You must take at least one for graduation requirements.

#### Sociology 1: The Study of Human Relationships (1 Semester 1 Credit) (Required)

**Grade 11-12** 

Human beings are complex creatures; however, when they interact and begin to form relationships and societies, things become even more complicated. Are we more likely to act differently in a group than we will when we're alone? How do we learn how to be "human"? Sometimes it can feel as if there are more questions than answers. Sociology I: The Study of Human Relationships seeks to answer these questions and many more as it explores culture, group behavior, and societal institutions and how they affect human behavior. You'll learn how social beliefs form and how this shapes our lives. How does this happen? Join us and find out! Note: This course has 8 units and is recommended to be taught over a single semester.

## Psychology A (1 Semester 1 Credit) (Required)

Grade 11-12

This one-semester course is intended for you to familiarize yourself with the concepts and theories of psychology. In Psychology, Semester A, you will trace the history of psychology and examine key psychological theories. You will discuss human development and explain how the nervous and endocrine systems affect human development and behavior. You will explain various theories related to language development and acquisition. You will discuss the influence of heredity, environment, society, and culture on human behavior.

## PE/Health

### First Aid & Safety (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

In this course, students learn and practice first aid procedures for a variety of common conditions, including muscular, skeletal, and soft tissue injuries. In addition, students learn how to appropriately respond to a variety of emergencies. They also learn the procedures for choking and CPR for infants, children, and adults. In addition to emergency response, students will explore personal, household, and outdoor safety, and disaster preparedness.

### Health (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

Everyone needs to take care of their body, but we aren't necessarily born with the knowledge of how to go about it. It's important to invest time and energy into understanding what it means to be healthy. There are many activities you can engage in which are dangerous for your long-term health, so you need to know how to identify and avoid these activities. It's also important to identify lifestyles that will lead to a longer, more enjoyable life. This course will guide you through lifestyle choices you will make which will ultimately impact your life in meaningful ways. This course is based on a rigorously researched scope and sequence that covers the essential concepts of health. Students are provided with a variety of health concepts and demonstrate their understanding of those concepts

through problem-solving. The five units explore a wide variety of topics that include nutrition and fitness, disease and injury, development and sexuality, substance abuse, and mental and community health.

#### Physical Education (Full Year-0.5 Credit per Semester)

**GRADES 9-10-11-12** 

Physical Education is required of all students throughout their four years in high school. Objectives of the physical education program include the development of acceptable health habits, good posture, worthwhile use of leisure time, knowledge of the rules of the activities, and fair play. Every student must comp[ete a weekly activity log.

## **Electives** (Taught by a CHS Teacher)

## Academic Success(1 Semester 1 Credit)

**GRADES 9-10-11-12** 

This one-semester elective course is intended as a practical, hands-on guide to help you improve your study habits and enhance your prospects for academic success, now and in the future.

#### **Animation 1a: Introduction (1 Semester 1 Credit)**

**GRADES 9-10-11-12** 

Have you ever watched a cartoon or played a video game where the animation of characters captivated you so much you wanted to create your own? If so, it's time to immerse yourself in the world of animation. Meet the industry players such as directors, animators, and 3D modelers. Develop your story by exploring design, the 12 principles of animation, creating a storyboard, and leveraging the tools of the trade. Let's bring your story to life with animation! Note: This course has 8 units and is recommended to be taught over a single semester.

## Animation 1b: Animating Your Creativity! (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

Prerequisites: Animation 1a: Introduction

It's time to start animating like the pros! In this hands-on course, you'll immediately start exploring the software Blender, your gateway to 3D modeling, computer animation, and postproduction procedures used in the film industry. Discover 3D modeling and animation of characters. Explore the basics of human anatomy and form to apply rigging, joints, and texture. Examine rendering and lighting effects and how to apply sound. And discover careers so you can start using your new skills right away. Note: This course has 8 units and is recommended to be taught over a single semester.

#### Anthropology 1: Uncovering Human Mysteries (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

What makes us human? Is it our ability to use language? Is it our abstract thinking skills or our use of tools and technology? In Anthropology 1: Uncovering Human Mysteries you will trace the history of homo sapiens and explore our evolutionary trail. This course offers an anthropological lens to observe our movement from cave dwellers to modern humans. It sheds light on how we forged our way and developed all of the things that make us humans, such as our cultures, languages, and religions. We, as humans in the 21st century, are highly intelligent, innovative people with astounding technological ability – how did we get this way? Note: This course has 10 units and is recommended to be taught over 2 semesters, but can be accelerated to be completed within a single semester if desired.

# Anthropology 2: More Human Mysteries Uncovered (1 Semester 1 Credit) Prerequisites: Anthropology 1: Uncovering Human Mysteries

**GRADES 9-10-11-12** 

How does your culture influence you? Find out how different locations shape various cultures and, in turn, how these cultures shape people's lives around the world – from the jungles of the Amazon to the islands of Indonesia. Anthropology II: More Human Mysteries Uncovered provides a fascinating look at this puzzle of culture. Many of our ancient cultures and languages were shaped by the geographical locations of our ancestors, and in this course, you will begin to visualize new ideas about how ancient cultures flourished through examining their views on life, death, art, and survival. In looking back and learning about cultures through the ages, we are better equipped to understand the world around us today. Note: This course has 8 units and is recommended to be taught over a single semester.

#### **Art History & Appreciation (1 Semester 1 Credit)**

**GRADES 9-10-11-12** 

This course explores the main concepts of art, expression, and creativity as it helps students answer questions such as what is art; what is creativity; and how and why people respond to art. It covers essential design principles such as emphasis, balance, and unity. Units include Art, History, and Culture; Western and World Art Appreciation; and Art and the Modern World.

#### Art in World Cultures A(1 Semester 1 Credit)

**GRADES 9-10-11-12** 

Who do you think is the greatest artist of all time? Maybe Leonardo da Vinci? Michelangelo? Maybe a more modern artist like Claude Monet or Pablo Picasso? Or is it possible that the greatest artist of all time is someone whose name has been lost to history? In Art in World Cultures, you'll learn about some of the greatest artists in the world while creating your art, both on paper and digitally. This course explores basic principles and elements of art and teaches you how to critique different artworks. And along the way, you will get to discover some traditional art forms from various regions of the world including the Americas, Africa, and Oceania. Note: This course will cover units 1-6.

## Art in World Cultures B(1 Semester 1 Credit)

**GRADES 9-10-11-12** 

Prerequisites: Art in World Cultures A

Who do you think is the greatest artist of all time? Maybe Leonardo da Vinci? Michelangelo? Maybe a more modern artist like Claude Monet or Pablo Picasso? Or is it possible that the greatest artist of all time is someone whose name has been lost to history? In Art in World Cultures, you'll learn about some of the greatest artists in the world while creating your art, both on paper and digitally. This course explores basic principles and elements of art and teaches you how to critique different artworks. And along the way, you will get to discover some traditional art forms from various regions of the world including the Americas, Africa, and Oceania. Note: This course will cover units 7-12.

#### Career Explorations (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

This one-semester course is intended as a practical, hands-on guide to career exploration and planning. This course covers all of the career clusters in the National Career Clusters Framework. You'll explore the career pathways within each cluster, determine the academic and skill requirements for different career pathways, and learn about the jobs available in each pathway and the work these professionals do. This course will also guide you through the process of creating an academic and career plan based on your interests, abilities, and life goals.

#### Criminology: Inside the Criminal Mind (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

In today's society, crime and deviant behavior are often one of the top concerns of society members. From the nightly news to personal experiences with victimization, crime seems to be all around us. In this course, we will explore the field of criminology or the study of crime. In doing so, we will look at possible explanations for crime from psychological, biological, and sociological standpoints, explore the various types of crime and their consequences for society, and investigate how crime and criminals are handled by the criminal justice system. Why do some individuals commit crimes but others don't? What aspects of our culture and society promote crime and deviance? Why do individuals receive different punishments for the same crime? What factors shape the criminal case process, from arrest to punishment?

#### Digital and Interactive Media Semester A (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

This one-semester course is intended as a practical, hands-on guide to help you understand the concepts of digital and interactive media. This course will cover careers, training, and emerging technologies in digital media. This course familiarizes you with the concepts involved in digital media, such as graphic design, digital photography, principles of design, and digital printing. This course also covers copyright laws and fair use involved in digital media.

## Digital and Interactive Media Semester B (1 Semester 1 Credit) Prerequisites: Digital and Interactive Media Semester A

**GRADES 9-10-11-12** 

This one-semester course is intended as a practical, hands-on guide to help you understand the concepts related to digital communication systems, audio and video production, multimedia, animation, and digital publishing. This course will cover digital communication systems. This course familiarizes you with audio and video technologies. This course also covers digital media design, multimedia, and animation. In addition, this course teaches you how to create a web page, publish digital products, and create a digital portfolio.

## Digital Photography 1a: Introduction (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

Have you wondered how professional photographers manage to capture that perfect image? Gain a better understanding of photography by exploring camera functions and the elements of composition while putting theory into practice by taking your spectacular shots! Learn how to display your work for exhibitions and develop skills important for a career as a photographer. Note: This course has 8 units and is recommended to be taught over a single semester.

# Digital Photography 1b: Creating Images with Impact! (1 Semester 1 Credit) Prerequisites: Digital Photography 1a: Introduction

**GRADES 9-10-11-12** 

Building on the prior prerequisite course, further develop your photography skills by learning more professional tips, tricks, and techniques to elevate your images. Explore various photographic styles, themes, genres, and artistic approaches. Learn more about photojournalism and how to bring your photos to life. Using this knowledge, build a portfolio of your work to pursue a career in this field! Note: This course has 8 units and is recommended to be taught over a single semester.

Digital Photography 2: Discovering Your Creative Potential(1 Semester 1 Credit)

Prerequisites: Digital Photography 1a: Introduction, Digital Photography 1b: Creating Images with Impact!

In today's world, photographs are all around us, including in advertisements, on websites, and hung on our walls as art. Many of the images that we see have been created by professional photographers. In this course, we will examine various aspects of professional photography, including the ethics of the profession, and examine some of the areas that professional photographers may choose to specialize in, such as wedding photography and product photography. We will also learn more about some of the most respected professional photographers in history and we will learn how to critique photographs to better understand what creates an eye-catching photograph. This course has 8 units and is recommended to be taught over a single semester.

#### **Essential Career Skills (1 Semester 1 Credit)**

**GRADES 9-10-11-12** 

This one-semester course is intended as a practical, hands-on guide to help you understand the skills required to achieve success in modern-day careers. This course has 21 lessons organized into five units, plus five Unit Activities. Each lesson contains one or more Lesson Activities. This course will cover essential career skills such as positive work ethics, teamwork, conflict resolution, effective speaking and listening, health and safety, and information technology.

#### Forensic Science 1: Secrets of the Dead (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

Fingerprints. Blood spatter. DNA analysis. The world of law enforcement is increasingly making use of the techniques and knowledge from the sciences to better understand the crimes that are committed and to catch those individuals responsible for the crimes. Forensic science applies scientific knowledge to the criminal justice system. This course focuses on some of the techniques and practices used by forensic scientists during a crime scene investigation (CSI). Starting with how clues and data are recorded and preserved, the student will follow evidence trails until the CSI goes to trial, examining how various elements of the crime scene are analyzed and processed.

# Forensic Science 2: More Secrets of the Dead (1 Semester 1 Credit) Prerequisites: Forensic Science 1: Secrets of the Dead

**GRADES 9-10-11-12** 

Although the crime scene represents the first step in solving crimes through forensic science, the crime laboratory plays a critical role in the analysis of evidence. This course focuses on the analysis of evidence and testing that takes place within this setting. We will examine some of the basic scientific principles and knowledge that guide forensic laboratory processes, such as those testing DNA, toxicology, and material analysis. Techniques such as microscopy, chromatography, odontology, entomology, mineralogy, and spectroscopy will be examined.

## Forensics: The Science of Crime (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

Fingerprints. Blood spatter. DNA analysis. The world of law enforcement is increasingly making use of the techniques and knowledge from the sciences to better understand the crimes that are committed and to catch those individuals responsible for the crimes. Forensic science applies scientific knowledge to the criminal justice system. This course focuses on some of the techniques and practices used by forensic scientists during a crime scene investigation (CSI). Starting with how clues and data are recorded and preserved, the student will follow evidence trails until the CSI goes to trial, examining how various elements of the crime scene are analyzed and processed.

#### Graphic Design and Illustration (A) (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

This one-semester course is intended as a practical, hands-on guide to help you understand graphic design concepts, graphic image creation, and image manipulation. This course has 14 lessons organized into 4 units, plus 4 Unit Activities. Each lesson contains one or more Lesson Activities. This course covers careers you can pursue in graphic design. It also covers the training and skills required for a graphic designer. In addition, this course describes how to create images using color and typography and how to manipulate images. It also guides you on how to create

images using design elements and principles. Finally, this course covers copyright laws and ethics related to the use of graphic design.

# Graphic Design and Illustration (B) (1 Semester 1 Credit) Prerequisites: Graphic Design and Illustration (A)

**GRADES 9-10-11-12** 

This one-semester course is intended as a practical, hands-on guide to help you understand advanced concepts of graphic design, including the creation of graphic products such as logos, posters, and magazine covers. The course will also help you explore concepts of multimedia and digital photography. This course has 14 lessons organized into 4 units, plus 4 Unit Activities. Each lesson contains one or more Lesson Activities. This course will cover the advanced manipulation of images. It will guide you on how to create graphic products such as logos, posters, and magazine covers. This course also covers multimedia and digital photography. In addition, the course covers art criticism in graphic artwork, digital publishing, and the creation of graphic design portfolios.

#### **High School Career Discovery (1 Semester 1 Credit)**

**GRADES 9-10-11-12** 

Your future career is likely something you've dreamed about since you were a child. Now it's time to turn that dream into a reality! In this course, you will explore your own strengths, interests, and preferences and use that information to uncover the best career for you! You will explore 17 career clusters, learn about the skills needed to work in different industries, and choose a path to pursue. You'll build a plan to get you from high school to your first day on the job, and craft a strong portfolio to land your perfect job. You've dreamed about your future career. Now it's time to create a plan and turn that dream into a goal!

### **History of the Holocaust (1 Semester 1 Credit)**

**GRADES 9-10-11-12** 

Holocaust education requires a comprehensive study of not only times, dates, and places, but also the motivation and ideology that allowed these events. In this course, students will study the history of anti-Semitism; the rise of the Nazi party; and the Holocaust, from its beginnings through liberation and the aftermath of the tragedy. The study of the Holocaust is a multi-disciplinary one, integrating world history, geography, American history, and civics. Through this in-depth, semester-long study of the Holocaust, high school students will gain an understanding of the ramifications of prejudice and indifference, and the potential for government-supported terror, and they will get glimpses of kindness and humanity in the worst of times.

#### Introduction to Social Media (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

This single-semester elective course is intended as a practical, hands-on guide to help you understand the world of social media and how individuals, social groups, and businesses are using different types of social media. You will discuss various types of social media and the technologies that spawned them in the initial two lessons. In the lessons that follow, you will take a closer look at different types of social media—from social and professional networks to geolocation and photo-sharing services. Finally, in the last few lessons, you will discuss how technological advances (specifically in mobile devices) and the legal environment impact social media and how businesses use social media in their marketing activities

## Introduction to Visual Arts (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

In Introduction to Visual Arts, you will trace the history of art and describe various art forms. You will identify the elements of art and examine the principles of design. You will analyze the parameters for evaluating and critiquing art. You will examine copyright laws and discuss the ethical use of art.

#### Learning in a Digital World: Digital Citizenship (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

The digital world seems to change every day, and touch more of our lives. We use technology to communicate with friends and family, find neverending entertainment options, follow our favorite sports teams and fashion trends, and do our school work. In Learning in a Digital World you will get the tools to navigate this exciting and always-changing world. Learn about real-world issues and how to solve real-world problems through interactive and hands-on assignments. Discover what it means to be a responsible digital citizen, expand your digital literacy, and become a successful online student. Consider the best ways to find, create, and share information, learn to maximize information and communication technologies, and explore digital content creation, from emails and blogs to social media, videos, and podcasts.

#### Principles of Art, A/V Technology, and Communications A (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

This one-semester course is intended as a practical, hands-on guide to help you understand the skills required for achieving success in modern-day careers in the arts, audio/video technology, and communications cluster. This course has 19 lessons organized into four units, with four Unit Activities. Each lesson additionally contains one or more Lesson Activities. This course will cover various topics in the arts, audio/video technology, and communication career cluster.

# Principles of Art, A/V Technology, and Communications B (1 Semester 1 Credit) Prerequisites: Principles of Art, A/V Technology, and Communications A

**GRADES 9-10-11-12** 

This one-semester course is intended as a practical, hands-on guide to help you understand the skills required for achieving success in modern-day careers in the arts, audio/video technology, and communications cluster. This course has 16 lessons organized into four units, along with four Unit Activities. Each lesson additionally contains one or more Lesson Activities. This course will cover various topics in the arts, audio/video technology, and communication career cluster.

### Principles of Information Technology A (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

Principles of Information Technology, Semester A is the first part of a two-semester course. It is designed to help you learn the basics of information technology. You will learn the fundamentals of computer systems, identify basic computer hardware components, describe input and output devices and peripheral devices, and compare different types of storage devices. You'll also learn about operating systems and application software. You'll learn to install, configure, and maintain software and hardware. You'll explore the internet and the World Wide Web, and various ways to communicate using the internet while minimizing security risks. You'll discuss legal and ethical issues in information technology. You'll learn to use word processors, presentation software, and spreadsheets, and learn about techniques to extract information from a database.

# Principles of Information Technology B(1 Semester 1 Credit) Prerequisites: Principles of Information Technology A

**GRADES 9-10-11-12** 

Principles of Information Technology, Semester B is the second part of a two-semester course. It is designed to help you go deeper in your study of information technology. You'll explore emerging technologies, multimedia applications, and computer programming concepts and programming languages. You'll learn about different types of computer networks and the need for network security and administration. You'll explore web development tools and web design techniques, and you'll learn to use HTML to design web pages and websites. Finally, you'll explore different career pathways in the field of information technology, and you'll identify the key skills and certifications you will need for these careers.

## **Electives** (Taught by Edmentum's Iowa Certified Teachers)

#### American Sign Language 1A (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

Did you know that American Sign Language (ASL) is the third most commonly used language in North America? American Sign Language 1a: Introduction will introduce you to vocabulary and simple sentences so that you can start communicating right away. Importantly, you will explore Deaf culture – social beliefs, traditions, history, values, and communities influenced by deafness.

#### American Sign Language 1B (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

The predominant sign language of Deaf communities in the United States, American Sign Language is complex and robust. American Sign Language 1b: Learn to Sign will introduce you to more of this language and its grammatical structures. You will expand your vocabulary by exploring interesting topics like Deaf education and Deaf arts and culture.

#### American Sign Language 2A (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

Building upon the prior prerequisite course, emphasis in this course is placed upon comprehension and signing. Learners will also continue to establish their communication skills and foster their understanding of deaf culture. In addition to learning classifiers, glossing, and mouth morphemes, students will explore vocabulary for descriptions, directions, shopping, making purchases, and dealing with emergencies.

#### American Sign Language 2B (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

Building upon the prior prerequisite course, students will increase their proficiency by learning about sequencing, transitions, role shifts, and future tenses. Students will learn how to tell a story and ask questions, benefiting from greater exposure to deaf culture. Speed, conversations, signing skills, and cultural awareness are characteristic of this course.

#### American Sign Language 3A (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

As you dive into more advanced ASL signing, including unique grammar features and advanced classifiers and locatives, you'll learn, compose, and present your newfound vocabulary and narratives by immersing yourself in Deaf culture and community. From opinions, slang, and idioms, to using technology and media that offers authentic Deaf perspectives. Explore how travel, cultural differences, and geography affect sign language. And gain a better understanding of Deaf culture by learning about important events and examining topics such as education, science, and literature.

### American Sign Language 3B (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

Are you ready to discover ways in which Deaf culture influences the world in general? After all, the concept of culture goes far beyond an understanding of Deaf history. Through discussing Deaf culture and experiences, you'll advance your signing skills by developing verb tenses, grammar, and syntax. Apply your language skills in real conversation activities and through opportunities to debate real issues. It's also time to explore the next steps in education and career opportunities for your new intermediate ASL skills.

#### **Advanced Computer Science (1 Semester 1 Credit)**

**GRADES 11-12** 

This one-semester course is intended to introduce you to the concepts of computer programming. This course has 20 lessons organized into four units, plus four Unit Activities. Each lesson contains one or more Lesson Activities. In Advanced Computer Science A, you will describe the basic concepts of computer programming. You will compile and run a simple Java program. You will use arithmetic, relational, and logical operators. You will implement algorithms, and use different types of loop and decision-making statements. You will create and use classes. You will create and manipulate one-dimensional and two-dimensional arrays. You will perform sequential search, binary search, selection sort, and insertion sort on an array. You will explain and implement object-oriented programming design. You will implement inheritance, polymorphism, and abstraction. Further, you will describe privacy and legality in the context of computing.

#### **Computer Programming I A(1 Semester 1 Credit)**

**GRADES 9-10-11-12** 

This one-semester course is intended as a practical, hands-on guide to help you understand the concepts and techniques associated with computer programming. This course describes the skills and training required for careers in computer programming and the work ethics required in a computing environment. This course describes number systems, data types, and functions used in computation. In addition, this course describes types of programming paradigms and program structures. Finally, this course explains how to create web pages in HTML and how to create a JavaScript program.

## Computer Programming I B (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

Prerequisites: Computer Programming I A

This one-semester course is intended as a practical, hands-on guide to help you understand various phases of the software development life cycle (SDLC). This course describes various phases of the SDLC such as analysis, design, development, testing, and implementation. This course describes software development methodologies, various types of project plans, Unified Modeling Language (UML) design, various types of testing, and system implementation. This course also identifies various security threats and risks to computer systems and the methods to mitigate them.

### Introduction to Cybersecurity (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

This one-semester course is intended to introduce you to the concepts of cybersecurity. In Introduction to Cybersecurity, you will examine key cybersecurity concepts and programs. You will identify the different types of cybersecurity threats and errors. You will explain how to protect your computer system, networks, and data from various cyber-attacks. You will describe the process of risk assessment, mitigation, and incident handling. You will examine various laws, standards, and ethical issues related to cybersecurity. Finally, you will explore the career opportunities in the field of cybersecurity.

#### Introduction to Finance (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

This one-semester course is intended to help you familiarize yourself with the basic and essential concepts of finance. This course will cover the fundamental concepts of finance, including the importance of finances and financial planning in personal life and business, ways to manage finances, different investment strategies, and various career options available in the field of finance.

#### Life Skills: Navigating Adulthood (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

What do you want out of life? How do you achieve your dreams for the future? These can be difficult questions to answer, but with the right tools, they don't have to be. This course will encourage you to learn more about yourself and help you to prepare for the future. You will explore goal setting, decision making, and surviving college and your career. You will also discover how to become a valuable contributing member of society. Now is the time to take action. It's your life, make it count!

#### Music Appreciation: The Enjoyment of Listening (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

Have you ever heard a piece of music that made you want to get up and dance? Cry your heart out? Sing at the top of your lungs? Whether pop, classical, or anything in between, music provides a powerful way for people to celebrate their humanity and connect with something larger than themselves. Music Appreciation: The Enjoyment of Listening not only will provide a historical perspective on music from the Middle Ages to the 21st century, but it will also teach you the essentials of how to listen and really hear (with a knowledgeable ear) the different music that's all around you. Learning how to truly appreciate sound and melody is the best way to ensure a continued love of this delightful art form.

#### **Networking Fundamentals A (1 Semester 1 Credit)**

**GRADES 9-10-11-12** 

Networking Fundamentals, Semester A is the first part of a two-semester course. This course introduces you to careers in networking as well as basic concepts in networking. You'll describe types of networks, network topologies, software-defined networking, private and public networks, as well as intranets and extranets. You'll also learn about the Internet of Things (IoT) technologies. You'll learn about networking models, networking protocols, IP addresses, and subnetting. You'll identify networking devices, cables, media, and connectors. You'll learn to install a network operating system and set up a small wired network. Finally, you'll identify common network security threats and preventive measures to secure a network.

## Networking Fundamentals B (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

## Prerequisites: Networking Fundamentals A

Networking Fundamentals, Semester B is the second part of a two-semester course. This course focuses on network planning, administration, troubleshooting, and maintenance. You'll learn about the different phases of project management and identify important skills needed to manage a project. You'll also plan, design, and document a network. You'll learn about wireless networking standards and access methods. You'll learn to set up and secure a wireless network. You'll learn about virtual private networks and cloud computing. You'll also learn to troubleshoot issues related to wired and wireless networks. Finally, you'll identify disaster recovery methods and describe how to

## Reading and Writing for Purpose (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

This course introduces useful, real-world information by having students learn to read legal, insurance, employment, and vehicle-related documents. Furthermore, students will explore media bias, trends in journalism, word structures, and research strategies. To entrench real-world applications, students will learn how to critically read, identify good sources of information, and create an outline, making this course an asset to building life and study skills.

#### Social Problems 1: A World in Crisis (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

War, crime, poverty, and global warming our world often seems full of dire warnings and predictions. How can we make sense of it all and still dare to step outside each day? Social Problems I: A World in Crisis will explore some of the biggest challenges facing our world today and prepare you to tackle them head-on. You'll learn what led to these social problems, what effects they have on our lives and societies, and what possible solutions exist for solving them. Whether you want to save the world from the next pandemic or better understand the effects of the media on society, this course will help you develop a plan of action!

#### Social Problems 2: Crisis Conflict & Challenges (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

It may seem like we live in a sometimes scary and ever-changing world. Everywhere we "look" from the homeless living on the streets, to worldwide health epidemics, to the often negative effects of our global world problems seem to appear at every corner. In Social Problems II: Crisis, Conflict, and Challenges, you'll explore more of the challenges we face and learn what we can do to reduce the effects of these conflicts and problems. From drug abuse to terrorists to the changing nature of communities in our digital world, we can better face and solve these problems when we have a deeper understanding of their causes and influences on our lives.

#### Sports and Entertainment Marketing (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

This one-semester course is intended to help you gain an insight into the field of sports, entertainment, and recreation marketing. This course covers fundamental concepts in sports, entertainment, and recreation marketing. It also covers essential skills related to advertising, sponsorship, and marketing campaigns. In addition, the course covers crucial workplace skills, such as teamwork and leadership skills.

## Web Technologies A (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

This one-semester course is intended as a practical, hands-on guide to help you understand the concepts of website design. This course will cover careers in web technology, uses of web technology, and emerging trends in web technology. It also covers principles of design and the creation of graphics. In addition, the course covers Internet protocols, web development tools, and client-server processing. The course also covers web page creation using HTML and style sheets. Finally, the course covers website design and the web development process.

# Web Technologies B (1 Semester 1 Credit) Prerequisites: Web Technologies A

**GRADES 9-10-11-12** 

This one-semester course is intended as a practical, hands-on guide to help you understand advanced concepts of website design and concepts related to desktop publishing and multimedia. This course covers the creation of desktop publishing and multimedia projects. It also covers legal and ethical issues related to the Internet and website design. In addition, this course covers web page creation using JavaScript. It also covers DHTML and XML. The course additionally covers how to gather requirements from the client, plan out website development, create a

wireframe, and create and publish a website. Finally, the course covers web maintenance and web administration.

## **World Languages** (Taught by Edmentum's Iowa Certified Teachers)

## French 1 A (1 Semester 1 Credit)

GRADES 9-10-11-12

In French 1A, you'll be introduced to several common situations in which people communicate, such as exchanging names and greetings, describing people by physical and personality traits, and describing family members and aspects of your social life. You'll start with basic sentence structures and grammatical tools, and you'll communicate by listening, speaking, reading, and writing in French as you internalize new vocabulary and grammar. You'll also learn about some regions of the French-speaking world that the central characters of each unit are visiting. You will build on this semester's work as you advance in your French studies: everything that you learn about a language and the cultures in which it is spoken will serve as a foundation for further learning.

#### French 1 B (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

In French 1B, you'll be introduced to several common situations in which people describe how to earn, save, and manage money, modes of urban transportation, various seasons, and the associated weather conditions, food, clothes, and activities. You'll also describe various art forms, plays, concerts, and movies. You'll discuss health and well-being, and travel and tourism. You'll build on what you learned in the French 1A course and communicate by listening, speaking, reading, and writing in French as you internalize new vocabulary and grammar. You'll also learn about some regions of the French-speaking world that the central characters of each unit are visiting. You will build on this semester's work as you advance in your French studies: everything that you learn about a language and the cultures in which it is spoken will serve as a foundation for further learning.

## French 2 A (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

Prerequisites: French 1 A, French 1 B

In French 2A, you'll be reintroduced to French in common situations, beginning with describing classes, school friends, teachers, and school supplies. You'll discuss different styles of dressing, housing, and neighborhoods, and learn about relationships between family members and friends, students and teachers, and employees and employer.

You'll also describe daily personal routines and schedules, household chores, and family responsibilities. Finally, you'll discuss different types of cuisine, dining establishments, and dining etiquette. You'll build on what you learned in the French 1B course to communicate by listening, speaking, reading, and writing in French as you internalize new vocabulary and grammar. You'll also learn about some regions of the French-speaking world where the central characters of each unit are visiting. You will build on this semester's work as you advance in your French studies: everything that you learn about a language and the cultures in which it is spoken will serve as a foundation for further learning.

#### French 2 B (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

In French 2B, you'll be reintroduced to French in common situations, beginning with various professions and career plans for the future. You'll discuss traveling to different regions and the flora and fauna found in each region and describe different types of trips, including road trips, camping, and ecotourism. You'll also describe different hobbies, activities, and crafts that people enjoy. Finally, you'll discuss different medical specialists, including dentists and veterinarians, and describe symptoms related to illness and injury. You'll build on what you learned in the French 2A course to communicate by listening, speaking, reading, and writing in French as you internalize new vocabulary and grammar. You'll also learn about some regions of the French-speaking world where the central characters of each unit are visiting. You will build on this semester's work as you advance in your French studies: everything that you learn about a language and the cultures in which it is spoken will serve as a foundation for further learning.

#### French 3 A/B (2 Semester 2 Credit)

**GRADES 9-10-11-12** 

In this expanding engagement with French, students deepen their focus on four key skills in foreign language acquisition: listening comprehension, speaking, reading, and writing. In addition, students read significant works of literature in French and respond orally or in writing to these works. The course consists of 180 lesson days formatted in an intuitive calendar view, which can be divided into two 90-day semesters and represents an ideal blend of language learning pedagogy and online learning. As students begin the course, they construct their own Avatar that accumulates "Avatar bucks"—by performing well on course tasks—to use to purchase items (virtual clothing, gadgets, scenery, etc.) at the "Avatar store". Continuing the pattern, and building on what students encountered in the first two years, each week consists of a new vocabulary theme and grammar concept, numerous interactive games reinforcing vocabulary and grammar, reading and listening comprehension activities, speaking and writing activities, and multimedia cultural presentations covering major French-speaking areas in Europe and the Americas. The course has been carefully aligned to national standards as set forth by ACTFL (the American Council on the Teaching of Foreign Languages).

## Advanced French (4) A/B (2 Semester 2 Credit)

**GRADES 9-10-11-12** 

Our online AP French Language & Culture course is an advanced language course in which students acquire proficiencies that expand their cognitive, analytical, and communicative skills. The AP French Language course prepares them for the AP French exam. Its foundation is the three modes of communication (Interpersonal, Interpretive, and Presentational) as defined in the Standards for Foreign Language Learning in the 21st Century.

#### Spanish 1 A (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

In Spanish 1A, you'll be introduced to several common situations in which people communicate, such as exchanging names and greetings, describing people by physical and personality traits, and describing family members and aspects of your social life. You'll start with basic sentence structures and grammatical tools, and you'll learn to communicate by listening, speaking, reading, and writing in Spanish as you internalize new vocabulary and grammar. You'll also learn about some regions of the Spanish Speaking world that the central characters of each unit are visiting. You will build on this semester's work as you advance in your Spanish studies: everything that you learn about a language and the cultures in which it is spoken will serve as a foundation for further learning.

#### Spanish 1 B (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

In Spanish 1B, you'll be introduced to several common situations in which people describe how to earn, save, and manage money, modes of urban transportation, various seasons, and the associated weather conditions, food, clothes, and activities. You'll also describe various art forms, plays, concerts, and movies. You'll discuss health and well-being and travel and tourism. You'll build on what you learned in the Spanish 1B course to communicate by listening, speaking, reading, and writing in Spanish as you internalize new vocabulary and grammar. You'll also learn about some regions of the Spanish-speaking world that the central characters of each unit are visiting. You will build

on this semester's work as you advance in your Spanish studies: everything that you learn about a language and the cultures in which it is spoken will serve as a foundation for further learning.

## Spanish 2 A (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

Prerequisites: Spanish 1 A, Spanish 1 B

In Spanish 2A, you'll be reintroduced to Spanish in common situations, beginning with describing classes, school friends, teachers, and school supplies. You'll discuss different styles of dressing, housing, and neighborhoods, and learn about relationships between family members and friends, students and teachers, and employees and employer. You'll also describe daily personal routines and schedules, household chores, and family responsibilities. Finally, you'll discuss different types of cuisine, dining establishments, and dining etiquette. You'll build on what you learned in Spanish 1B to communicate by listening, speaking, reading, and writing in Spanish as you internalize new vocabulary and grammar. You'll also learn about some regions of the Spanish-speaking world where the central characters of each unit are visiting. You will build on this semester's work as you advance in your Spanish studies: everything that you learn about a language and the cultures in which it is spoken will serve as a foundation for further learning.

#### Spanish 2 B (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

In Spanish 2B, you'll be reintroduced to Spanish in common situations, beginning with various professions and career plans for the future. You'll discuss traveling to different regions and the flora and fauna found in each region and describe different types of trips, including road trips, camping, and ecotourism. You'll also describe different hobbies, activities, and crafts that people enjoy. Finally, you'll discuss different medical specialists, including dentists and veterinarians, and describe symptoms related to illness and injury. You'll build on what you learned in the Spanish 2A course to communicate by listening, speaking, reading, and writing in Spanish as you internalize new vocabulary and grammar. You'll also learn about some regions of the Spanish-speaking world where the central characters of each unit are visiting. You will build on this semester's work as you advance in your Spanish studies: everything that you learn about a language and the cultures in which it is spoken will serve as a foundation for further learning.

## Spanish 3 A (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

Prerequisites: Spanish 2 A, Spanish 2 B

In Spanish 3A, you'll be reintroduced to Spanish in common situations, beginning with various daily routines, describing friends and family, childhood memories and activities, and childhood hopes and aspirations. You'll discuss and describe art, such as paintings and sculptures, and literature, such as novels and novellas, and give reactions and form opinions about art and literature. You'll also understand the process of selecting and applying to a university, aspirations at the university, and dealing with leaving home and moving into a dormitory. Further, you will describe university life and expectations from the university experience. You'll explore the dynamics and challenges of multiethnic and developing societies, environmental and social issues, causes and possible resolutions, and learn about unfamiliar countries using technology. Finally, you'll discuss current events reported in the media, different types of classified and other types of advertisements in the media (both print and online), the sections and supplements of a newspaper or magazine, and various jobs available in the media.

## Spanish 3 B (1 Semester 1 Credit)

**GRADES 9-10-11-12** 

In Spanish 3B, you'll be reintroduced to Spanish in a variety of situations, beginning with multiculturalism, bilingualism, cultural influences on traditions, customs, food, and social experiences, and legends and folklore from different cultures. You'll discuss and describe genres of music, poetry, drama, short stories, and proverbs from different cultures. You'll also explore how geographical features affect the weather, and how the geography and weather affect the clothing, food, and livelihoods of the local population. You'll also understand the history of Venezuela and how the Spanish conquerors and indigenous people shaped the culture of the country, and you'll learn about the South American independence movement, including some significant freedom fighters and their struggles to win independence. You will also discuss religions practiced in Argentina, the cultural icons of the country and how they compare to cultural icons from other countries, sports and activities in Argentina, some national symbols, such as the gauchos, and idioms and sayings from Argentina. Finally, you'll discuss the types of wildlife and natural and agricultural resources found in Costa Rica, the human resources of the country that help overcome economic and natural disasters, and how to write formal and informal letters to share experiences.

#### Advanced Spanish(4) A/B (2 Semester 2 Credit)

**GRADES 9-10-11-12** 

The AP® Spanish Language and Culture course is an advanced language course in which students are directly prepared for the AP® Spanish Language and Culture test. It uses as its foundation the three modes of communication: interpersonal, interpretive, and presentational. The course is conducted almost exclusively in Spanish. The course is based on the six themes required by the College Board: (1) global challenges, (2) science and technology, (3) contemporary life, (4) personal and public identities, (5) families and communities, and (6) beauty and aesthetics. The course teaches language structures in context and focuses on the development of fluency to convey meaning. Students explore culture in both contemporary and historical contexts to develop an awareness and appreciation of cultural products, practices, and perspectives. Students should expect to listen to, read, and understand a wide variety of authentic Spanish-language materials and sources, demonstrate proficiency in interpersonal, interpretive, and presentational communication using Spanish, gain knowledge and understanding of the cultures of Spanish speaking areas of the world, use Spanish to connect with other disciplines and expand knowledge in a wide variety of contexts, develop insight into the nature of the Spanish language and its culture, and use Spanish to participate in communities at home and around the world. The AP® Spanish Language and Culture course is a college-level course. The intensity, quality, and amount of course material can be compared to that of a third-year college course.

## **Electives that can be taken in person at CHS:**

#### Visual Arts

#### **INTRODUCTION TO ART (1 Semester 1 Credit)**

**GRADES 9-10-11-12** 

Introduction to Art is open to all high school students interested in the visual arts and is a prerequisite for all other art classes. This course allows a student to discover the art and enhance their abilities. It is designed to provide a basic background in 1. Encouraging the creative expression of visual arts. 2. Developing skills in making personal art. 3. Building artistic confidence. 4. Experiencing different art media. Areas worked in will include drawing, painting, color mixing, design, ceramics, and oil pastels, to name a few. Areas investigated will be color, shape, form, and space.

#### DRAWING/WATERCOLOR PAINTING (1 Semester 1 Credit)

**GRADES 10-11-12** 

Prerequisite: Into to Art

This course is designed for further creativity and experimenting with drawing materials and watercolors. Drawing with pencil and charcoal, are among the drawing tools to be used. Emphasis will be on the use of form, shape, texture, value, and contrast to create drawings of interest. In watercolor, students will learn about watercolor washes, wet/dry applications, and sponge applications. Several opportunities will be provided to experiment with watercolor. The class will be divided equally between drawing and painting.

#### **ACRYLIC AND OIL PAINTING (1 Semester 1 Credit)**

**GRADES 10-11-12** 

Prerequisite: Intro to Art

Creativity and experimentation with acrylic paint or a painting medium that is water-based (latex and tempera) are the basic components of the Acrylic and Oil Painting class. Students will mix colors, blend colors, paint details, layer paint, and learn to dry brush when appropriate. Painting with freedom and without fear is a goal. Students will be expected to express themselves on assigned projects and independent projects. Students will be allowed the possibility to explore oil paint. Art History will also be explored.

#### **CERAMICS (1 Semester 1 Credit)**

**GRADES 11-12** 

Prerequisite: Intro to Art

Ceramics is designed to introduce students to the three-dimensional aspects of art through the use of clay. Ceramic students will work with clay and explore the constructive possibilities through basic building principles of pinch, slab, coil, and throwing. The use of ceramic glazes and the basic knowledge of an electric kiln are important to the class. Exploring ways to create with clay and decorating clay pieces are key to the course. Students should NOT be afraid to get their hands dirty! Art History will also be explored.

## **Agriculture Education**

## INTRO TO AG (1st Semester 1 Credit)

GRADES 9-10-11-12

This class covers basic record-keeping principles, careers in Ag, an FFA unit, foodborne illness, and a study of key people and their inventions in the history of agriculture.

#### ANIMAL SCIENCE (2nd Semester 1 Credit)

**GRADES 9-10-11-12** 

The class covers livestock production principles for beef, sheep, swine, equine, and poultry including feeding, nutrition, selection, reproduction, health, and management.

#### **CROP SCIENCE (1st semester 1 Credit)**

**GRADES 9-10-11-12** 

The basic principles of soils, conservation of resources, cover crops, crop pests, tillage practices, climate, major crops of lowa, and production of these crops will be covered in this course.

#### AG LEADERSHIP (2nd Semester 1 Credit)

**GRADES 9-10-11-12** 

This course covers the parliamentary procedure, resume writing, interviewing skills, and a study of history's great leaders.

#### AGRIBUSINESS (1st Semester 1 Credit)

**GRADES 9-10-11-12** 

This course will cover business organizations, cash flow analysis, budgeting, cost and return analysis, and least-cost rations.

#### AG MARKETING AND SALES (2nd Semester 1 Credit)

**GRADES 9-10-11-12** 

This class will include units on sales, marketing, and risk management. Students will plan and carry out an organized sales project, and get their OSHA 10-hour certification.

### FOOD SCIENCE (2nd Semester 1 Credit)

**GRADES 9-10-11-12** 

Processing of agricultural products will be examined including food chemistry, food and fiber production, food processing operations, and meats judging through presentations and activities.

#### NATURAL RESOURCES (1st Semester 1 Credit)

**GRADES 11-12** 

During this class, the students will explore careers in Natural Resources and study Fish, Wildlife and Forest Resources, Erosion Control Methods, Wetland, Outdoor Recreation and study water quality while on a fishing trip. We will also study Aldo Leopold and some of his works.

#### **HORTICULTURE I (1st Semester 1 Credit)**

**GRADES 10-11-12** 

Prerequisite: Biology

This course will include the study of career opportunities in Horticulture, plant nutrient needs, landscape maintenance, bulb plants, plant identification, and poinsettias will be raised and sold. This class will include extensive hands-on activities.

#### **IHCC SURVEY OF ANIMAL INDUSTRY (1st Semester 1 Credit)**

**GRADES 11-12** 

This course discusses the integration of livestock in a sustainable farming system including small-scale production for niche markets. Topics include appropriate breed selection, nutrition, reproduction, diseases, processing, and land management for hogs, poultry, cattle, sheep, and goats.

#### IHCC PRINCIPLES OF HORTICULTURE (2nd semester 1 Credit)

**GRADES 11-12** 

This course will provide the student with the essential knowledge and skills necessary for a solid orientation in horticulture. Areas of study include the climate and plant growth, botanical nomenclature, anatomy, propagation, vegetable gardening, fruit trees, flower, and herb gardening. This class will include extensive hands-on activities producing and marketing a crop of bedding plants.

## Music

## **BAND (Full Year 2 Credits)**

**GRADES 9-10-11-12** 

The CHS Band meets daily. The band curriculum includes Marching Band, Basketball Pep Band, Concert Band, and lessons. Optional performance groups include jazz band 2, solo, and ensemble, and All-State, and Honor Band auditions. Students must be enrolled in the band for consecutive semesters while at CHS. Once a student drops band, they may not re-enroll unless special permission is given from the director. There is a band handbook available, which includes additional information.

#### JAZZ BAND I (Full Year 1 Credit)

This is a full-year class that meets in the mornings during 0 hour. Students will learn varying styles of Jazz and perform concerts, public performances, and contests throughout the school year. Performing improvised solos is an option but encouraged as part of the jazz band. This is an auditioned ensemble composed of typical jazz band instrumentation. Enrollment in this course is only with the recommendation of the director. Attendance at all performances is an expectation for members of this group.

#### **CONCERT CHOIR (1 Credit per Semester)**

**GRADES 9-10-11-12** 

The Concert Choir is chosen by audition only. An advanced mixed honor choir focuses on the preparation of concert literature. Optional performance groups include Triple Trio, Solo, Ensemble and Jazz Choir, Madrigal, and Male Octet. Students must be eligible and adhere to the Good Conduct Policy as well as the State Eligibility Criteria. Students must show proficiency in sight-reading, tonal memory, and teamwork skills. Auditions are held in the spring of the preceding school year. Students who are new to the district may audition in November at the discretion of the instructor.

## **Applied Sciences (Industrial Arts)**

## **WOODS I (1 Semester 1 Credit)**

**GRADES 9-10-11-12** 

General Woodworking is an introductory course offered to all students. The course is designed to provide students with a variety of experiences in cabinet making through the production of a required project: a mantel Clock. Examples of the skills and knowledge the student will gain are: Wood and wood materials Design and planning Measurement and layout Safety of machine and hand tools Use of machine and hand tools Joinery Fasteners Finish Related careers in industry Proper planning, problem-solving, and organization is stressed throughout this course. There is a \$40 shop fee for this class.

#### **WOODS II (1 Semester 1 Credit)**

**GRADES 9-10-11-12** 

Prerequisite: Woods I Woodworking II is a semester course.

The course is designed to continue and build on the skills and knowledge learned from Woods I. Students will continue to use design, planning, safety, problem-solving, critical thinking, and machine and tool usage. Students will be assigned a bookcase project. Students will have to pay for the material used (approximate cost will be \$60 minimum).

# DMACC PROJECT LEAD THE WAY INTRODUCTION TO ENGINEERING (Full Year 2 Credits) GRADES 9-10-11-12

Introduction to Engineering course is designed for students to experience the engineering mindset, and how engineers design, develop, and communicate. The course allows students to engage in the design process. Some of the highlights, in the class, are learning the designing of products, problem-solving, and visualization. The class will explore communications of engineers, which entails Computer Aided Drafting and Designing (CADD) and solid modeling. Students will learn about forces, automation, physics for engineers, and automation for designing. The class is a dual credit course with DMACC.

# DMACC PROJECT LEAD THE WAY PRINCIPLES OF ENGINEERING (Full Year 2 Credits) GRADES 10-11-12 Prerequisite: Algebra I

\*PROJECT LEAD THE WAY Intro to Engineering recommended but not required Principles of Engineering explores engineering physics covering the physics and principles that engineers use in industry and our daily lives. Students will explore simple machines and their mechanical advantages; plus, engage in learning and discussing energy sources and their applications. This course will investigate materials and their structures. Students will investigate statics and explore forces on the stationary or static structures. Students will learn control systems while applying their learning to VEX robotics and programming. This class is a concurrent credit course with DMACC.

#### **GENERAL METALS (Full Year 2 Credits)**

**GRADES 9-10-11-12** 

General Metals is a full-year course that is open to freshmen, sophomore, junior and senior students. It is a prerequisite to the Machine Metals course. General Metals is a laboratory course. The major emphasis of study and activity is centered in the areas of sheet metal, welding, and introductory machining. The first course is devoted to basic concepts of metal processing, blueprint reading, precision measuring, laying out designs, and fundamentals of metalworking tool application.

#### **MACHINE METALS (Full Year 2 Credits)**

**GRADES 10-11-12** 

Machine Metals is a full-year course, open to sophomore, junior, and senior students that have successfully completed General Metals. Machine Metals is a laboratory course. The major emphasis of study and activity is developed around the basic metalworking machines, such as the lathe, vertical and horizontal mill, drill press, tool grinder, and computer-operated machines (CNC). Welding is continued from General Metals with the inclusion of TIG welding, MIG welding, and plasma cutting. The information and activities associated with the machinist trades is the focus of this course. Students experience the mathematics, science, and skills required to set up, maintain and operate metalworking machines. Required setups and machining exercises account for a major portion of the students' time.

#### **ADVANCED MACHINE METALS (Full Year 2 Credits)**

**GRADES 11-12** 

Advanced Machine Metals is a full-year course, open to juniors and seniors who have completed General and Machine Metals courses. This project-oriented lab class involves machining parts on the lathe, vertical, and horizontal milling machines.

#### **IHCC MACHINE SHOP PRACTICES (1st Semester 1 Credit)**

**GRADE 12** 

This course covers safety in machine shops, environmental safety, measurement layout, inspection, setup, basic bench work practices, and non-traditional machining processes.

#### **IHCC MACHINE OPERATIONS (2nd Semester 1 Credit)**

**GRADE 12** 

This project-oriented lab is the first class in the machining series. The operations involve machining parts utilizing a lathe, vertical milling machine, drill press, surface grinder, shaper, pedestal grinder, and band saw.

## Rathbun Area Career Academy (Junior and/or Senior Year)

These programs are on the IHCC Centerville Campus. Students get a head start on their college education. Students receive hands-on instruction. Students earn both high school and college credits at the same time. All courses are offered at no cost to the student.

#### **Agriculture Academy**

Students have the opportunity to explore various areas within the field of agriculture. Landscape & Turfgrass Technology, Animal Science, and Precision Farming.

#### **Construction Academy**

Students will have the opportunity to explore the many aspects of the construction field. They will learn valuable skills in residential, commercial, industrial, or public works construction.

#### **Health Sciences Academy**

Students will get a chance to explore the vast opportunities within Health Sciences in this academy. Note: Students are required to have a cumulative high school 2.5 GPA for admission into this academy.

## **Industrial Maintenance Academy**

Students will figure out issues and fix machines that use electricity, hydraulics, and motor circuits. Become a "doctor" of machines!!

## Albia Area Career Academy

#### \*Automotive Technology

Students will learn engine repair, automatic transmissions, brakes, and electrical systems.

#### \*Diesel Technology

Students will learn about engine repair, automatic transmissions, brakes, and electrical systems.

"College" is a broad term that encompasses all options after high school that lead to what employers are looking for, or that lead to further education or training including 2 and 4-year options, certificates, diplomas, apprenticeships, military, and more!

If you are interested in registering or have questions about IHCC academies, on-campus or online classes, or classes offered in the high school please contact: High School Counselor.