

Highland
High School



Course
Descriptions

Graduation Requirements

2025-2026 Highland Course Offerings

Fine Arts

Band

Length: Year

Grade: 9-12

Credits: 2

Instrumental music education (band) is offered to all high school students, without a proficiency requirement. Whether you want to start band or continue with band, we have a place for you. Skill Assessments can be accommodated to meet a student's current level of performance. High School band members perform in marching, pep, and concert bands. Many additional performing opportunities are available such as jazz band, solo and small ensemble performances, and numerous festival honor bands. The Highland Band has an active performance schedule, often outside of the school day. Each band member receives a 15-minute individual lesson each week for more tailored feedback to their musical needs.

Choir

https://youtu.be/y-GqSy4_1fk

Length: Year (2 credits per year)

Grade: 9-12

Students will sing a variety of classical and contemporary literature in order to enhance proper vocal technique, develop music literacy, improve sight-reading skills and develop an appreciation for and an understanding of the music of other cultures. Pitch-matching and retention are essential for successful ensemble participation. Refined singing requires the student to work collectively, individually, accurately, and attentively. To achieve these accomplishments, the director will provide individual and class instruction/activities. Private lessons are required, as scheduling allows, for all choral students. Singers will be required to perform in concerts with this ensemble.

Art

Art Exploration

Length: Semester or Year

Grade: 9-12

- Fall: Clay Handbuilding, Drawing, Mixed Media, Oil Pastel, Pen & Ink, Stained Glass, Watercolor
- Spring: Acrylic/Tempera Painting, Batik/Tye-Dye Fabric, Clay Wheel, Sculpture Mixed Media, Stained Glass (Optional)

Focus on Learning

- Understand elements of art with emphasis on color theory
- Exposure to a variety of visual art mediums and concepts
- Gaining skills using new tools, and equipment
- Develop safe and resourceful studio habits

Art 2-4

Length: Semester or Year (Must take Art 1 for two semesters)

Grade: 10-12

- Fall: Bookbinding, Calligraphy, Clay, Drawing, Pastels, Pen & Ink, Stained Glass, Watercolor, Woodworking
May choose additional mediums for 1-2 projects*
- Spring: Acrylic/Tempera Painting, Batik/Tye-Dye Fabric, Drawing, Clay Wheel, Sculpture Mixed Media, Silkscreen, Stained Glass (Optional) Watercolor
May choose additional mediums for 1-2 projects*

Focus on Learning

- Understand principles of art with emphasis on design theory
- Exposure to more visual art mediums and concepts.
- Gain and grow in expertise and skill in chosen art mediums and crafts.
- Develop problem solving habits.

Agriculture Education

***To be in FFA, students MUST have an agriculture education course in their schedule for at least one semester (quarter for middle school).**

Table 1. Agricultural Pathways	Animal Science Pathway	Plant Science Pathway	Power Structure and Systems Pathway	Agribusiness Pathway	Food Science and Service Pathway	Careers in Ag	Ag Leadership
7th Grade	EXPLORATORY AG (7AG)	EXPLORATORY AG (7AG)	EXPLORATORY AG (7AG)	EXPLORATORY AG (7AG)	EXPLORATORY AG (7AG)	EXPLORATORY AG (7AG)	EXPLORATORY AG (7AG)
8th Grade	EXPLORATORY AG (8AG)	EXPLORATORY AG (8AG)	EXPLORATORY AG (8AG)	EXPLORATORY AG (8AG)	EXPLORATORY AG (8AG)	EXPLORATORY AG (8AG)	EXPLORATORY AG (8AG)
Freshman	Ag Science 1 (AG1)	Ag Science 1 (AG1)	Ag Science 1 (AG1)	Ag Science 1 (AG1)	Ag Science 1 (AG1)	Ag Science 1	Ag Science 1
Sophomore	Animal Science 1 (AS1)	Plant Science 1 (PS1)	Power, Structure, and Technology 1 (PST1)	Animal Science 1 (AS1) OR Plant Science 1 (PS1)	Animal Science 1 (AS1) OR Plant Science 1 (PS1)	Ag Leadership	Ag Leadership
Junior	Animal Science 2 (AS2)	Plant Science 2 (PS2)	Agriculture Business Foundations (ABF)	Agriculture Business Foundations (ABF)	Food Science Systems (FSS)	Ag Leadership	Ag Leadership
Senior	Animal Science 3 (VET)	Plant Science 3 (ESS)	(Any of the senior level options)	Agriculture Business Foundations (ABF)	(Any of the senior level options)	Ag Leadership	Ag Leadership

Ag Science I: [Introduction to Agriculture](#)

Length: Academic Year

Grade Level: 9-12 (ALL first year ag students should take Intro before taking any of the other pathway classes unless given special permissions to do so)

CASE: Agriculture, Food, and Natural Resource will lead the curriculum for this course. The course will include the introduction of basic scientific principles relating to agriculture and food production. Students will gain an awareness of educational and career opportunities in agriculture. The course is designed for any student interested in agriculture and food production. Students will cover the orientation of agricultural careers, FFA, and develop a Supervised Agricultural Experience (SAE). Record keeping, agriculture industry, and the other available agricultural classes and pathways will also be introduced. FFA is an integral part of the course, offering the opportunity to be involved in leadership activities and to receive recognition for accomplishments made pertaining to classroom achievements.

[Animal Science 1 \(SAS\)](#)

Length: 1 Semester

Grade Level: 10-12

Small Animal Science will enable the student to develop an understanding in traditional areas such as animal management, nutrition, genetics, anatomy, reproduction, production practices, and the role animals play in our society. The animal species that we will cover include: dogs, cats, rabbits, and other small and large companion animals. Students will learn a small animal veterinarian aspect in the class as well as the career opportunities available regarding companion animals. FFA is an integral part of the course, offering the opportunity to be involved in leadership activities and to receive recognition for accomplishments made pertaining to classroom achievements.

[Animal Science 2 \(LAS\)](#)

Length: Academic Year

Grade Level: 11-12

Large Animal Science includes instruction such as animal breeding, genetics, animal nutrition, livestock management, marketing and economics in livestock production, anatomy and physiology, meat science, veterinarian science and animal systems. The animal species covered include: cattle, horses, sheep, goat, swine, and poultry. FFA is an integral part of the course, offering the opportunity to be involved in leadership activities and to receive recognition for accomplishments made pertaining to classroom achievements. Students joining this class at semester are strongly encouraged to have previous agriculture class due to the FFA record book requirement.

[Animal Science 3 \(VET\)](#)

Length: Semester

Grade Level: 11-12

Vet Science will teach students about basic biology at the macro and micro level.

Students will learn about animal body anatomy and physiology such as the musculoskeletal system, circulatory system, respiratory system and reproductive system. Students will also learn the basic needs for animal nutrition. Diseases, treatments, and cures are also a large part of the curriculum. During the principles of surgery, students will gain understanding of laceration healing and surgical considerations for animals. Lastly, students will do a job shadow, mock interview, and take place in a mock surgery through the local vet clinic. Students will use these experiences to take a deeper look into professionalism and careers as well.

Plant Science I

Length: Plant Science I-Fall Semester

Grade Level: 10-12 Freshmen

Prerequisite: Plant Science I before taking Plant Science II

This course is designed to give instruction in the areas of exploring the horticulture field, greenhouse management, pest control, propagation, landscaping, lawn and turn management, crop and soil science, gardening, floral design, and even helping plants survive in the most extreme conditions. A greenhouse will be available for practical hands-on laboratory experience as related to the classroom. Students will design and implement landscape models as well as learn the market and select a horticultural customer base. Students will also learn how to keep plants alive in apocalyptic/the most extreme conditions. This course will also teach the physical, chemical, and biological properties of soils; soil formation, classification and global distribution; soil health, soils and humanity and sustainable land management. FFA is an integral part of the course, offering the opportunity to be involved in leadership activities and to receive recognition for accomplishments made pertaining to classroom achievements.

Plant Science II

Length: Plant Science I-Spring Semester

Grade Level: 11-12

Prerequisite: Plant Science I before taking Plant Science II

This course is designed to give instruction in the areas of exploring the horticulture field, greenhouse management, pest control, and propagation. The greenhouse will be heavily utilized for students to do agriscience projects, self-studies, and research on propagation practices. Students will help plan, purchase, propagate, market, advertise, and sell the plants that will be in the final semester greenhouse sale. FFA is an integral part of the course, offering the opportunity to be involved in leadership activities and to receive recognition for accomplishments made pertaining to classroom achievements.

Ag Leadership

Length: Spring Semester

Grade Level: 10-12

High school agriculture leadership classes may include lessons on leadership skills, communication, public speaking, problem solving/decision making, time management, employability skills, team building and careers in agriculture.

Agricultural Business Foundations (ABF)

Length: 1 Semester

Grade Level: 11-12

CASE: Agricultural Business Foundations will be the lead curriculum for this course. Agribusiness is a course designed to develop competencies needed to get a job in the field of agriculture. It develops skills in job resumes, how to sell, how to communicate with customers, job interviews and related areas. The units include ag.business functions, human relations, verbal and written communications, sales and selling, advertising and marketing, and record keeping. By the end of the course, students will have developed their own created product, service, or business and will present it to a panel of judges. This course is a semester-long course written using the CASE system of activities, projects, and problems that incorporates business mathematics, reading and writing components woven in the context of agriculture. FFA is an integral part of the course, offering students the opportunity to be involved in leadership activities and to receive recognition for accomplishments made pertaining to classroom achievement.

Food Science Systems (FSS)

Length: 1 Semester

Grade Level 11-12

CASE: Food Science Systems will cover topics including careers in food science, the farm to plate concept, wholesale and retail, food technologies, pathogens, storage, facility management, meat and dairy science, exotic foods, nutrition, allergens, food processing, and running a small business. The greatest importance of this course is for students to evaluate the effects of processing, preparation, and storage on the quality, safety, wholesomeness, and nutritive value of foods. Food science integrates many branches of science and relies on the application of the rapid advances in technology to expand and improve the food supply. FFA is an integral part of the course, offering students the opportunity to be involved in leadership activities and to receive recognition for accomplishments made pertaining to classroom achievement.

Power, Structures, and Technology 1 (PST)

Length: 1 Semester

Grade Level: 10-12

Agricultural Power and Technology is a foundation-level course designed to prepare students for the wide array of career opportunities in agricultural engineering. Throughout the course, students apply technical skills while becoming competent in the process used to operate, repair, engineer, and design agricultural tools and equipment. CASE provides extensive preparation for the teacher to be proficient and confident in their ability to provide proper instruction of mechanical skills and concepts.

BUSINESS

[Business Program of Study](#)

[Information Solutions Program of Study](#)

General Business

Length: One Semester

Grade: 9-12

This course provides students the basic fundamentals of general business practices and concepts. Students will learn different economic systems, economic resources, factors affecting economic conditions, the global marketplace, marketing strategies, business formations, consumer purchasing decisions, and planning and obtaining financial resources.

[General Business Video Description](#)

Computer Applications

Length: Year Long

Grade: 9-12

Students will learn a variety of software programs including word processing, spreadsheets, presentation and database programs. These software applications form the basis of many workplace environments. Additional units, such as creating simple web pages, basic programming, etc., will be covered after completing the four Microsoft Office applications if time permits.

[Computer Applications Video Description](#)

Advanced Computer Applications

Length: Year Long

Grade 10-12

Course will be a continuation of Computer Applications. Students will expand skills by learning elements of desktop publishing, webpage design, video editing, audio editing, and other technological trends. Students will demonstrate how to manipulate images through photo editing software, utilizing basic to advanced techniques. Students will learn how to construct a web page through fundamentals of coding through XHTML. Students will utilize audio and video editing software to record, edit, and finish final products in electronic form.

[Advanced Computer Applications Video Description](#)

Computer Science Principles (Intro to Coding)

Length:

Grade 9-12

This course introduces high school students to a broad range of computer science topics. Topics covered range from the Internet, algorithms, big data, programming, digital privacy and security. This class focuses on developing strong computer programming skills. After completing this class, students will gain a better understanding of the structure of digital information, how to write code in Javascript and text to program digital information, and how information is communicated electronically.

[Computer Science Principles Video Description](#)

Accounting I

Length: Year Long

Grade: 10-12

This course provides students the basic fundamentals of the accounting process. Students will learn the accounting equation, the components of financial statements, the process of recording and posting transactions, and accounting terminology. This course will provide knowledge pertaining to the business environment along with personal financial skills. Any students interested in exploring business and/or accounting as a career are strongly recommended in taking this course.

[Accounting Video Description](#)

Accounting II

Length: Year Long

Grade 11-12

Prerequisite: Accounting I

This course provides students advanced fundamentals of the accounting process. Students will learn the various depreciation methods, inventory methods, and uncollectible account methods. Departmental business accounting methods will also be demonstrated. An advanced understanding of financial statements will be demonstrated. This course expands on previous accounting basics learned from Accounting I.

Business Law

Length: One Semester

Grade: 11-12

This course provides students the basic fundamentals of business law. Students will learn legal principles and concepts dealing with business transactions, the courts, and criminal and civil law. Students will identify legal concepts and apply those concepts to actual and fictional court cases.

Students will distinguish valid contracts from invalid agreements, and how contractual law impacts businesses and even personal business decisions. Students will identify outstanding debts and indicate the resulting penalties and ramifications of unpaid debts.

[Business Law Video Description](#)

Personal Finance

Length: One Semester

Grade: 11-12

The course Personal Finance prepares students for successful management of their personal finances. It is a course that addresses the knowledge, skills, attitudes, and behaviors associated with the management of family economics and financial education. A project-based approach will be utilized. Throughout this course, students will learn how to: analyze needs versus wants, set financial goals, research the lifecycle of financial planning, investigate human capital, read paychecks and tax forms, manage cash, credit and bank accounts, examine the time value of money and savings, identify major expenditure categories, develop personal spending plan, investigate the stock market, examine economic systems and consumer decisions, and career development.

[Personal Finance Video Description](#)

Language Arts/Public Speaking

Required Classes

English I

Length: 1 year

English I is designed to raise student's reading, writing, and speaking skills to prepare them for their sophomore year. We will be exploring short stories, novels, non-fiction, plays, and poetry and meeting the Iowa Core standards for reading, writing, language, and speaking. Texts covered include *Anthem*, *Night*, *Just Mercy*, *Romeo and Juliet*, and *Glass Menagerie*. Students will learn through a range of differentiation and scaffolding learning strategies. Literary elements include theme, symbolism, poetic devices, character development, and more.

English II

Length: 1 year

Prerequisite: English 1

The second high school English class. The class builds on work done in English 1, with focus on writing the essay, short story response, poetry, the novel, and nonfiction evaluation. The examination of critical viewpoints and the literary research project are writing keys. English 2 includes multi-cultural readings as well as the reading of Julius Caesar, Of Mice and Men, The Absolutely True Diary of a Part Time Indian, and other works. Students are exposed to a variety of learning strategies and 21st century skills.

Communications

Length: 1 semester

Recommended 9th or 10th grade

A class that deals with human communication, focussing on interpersonal communication and public speaking. Students will learn the basics of how the voice is created, the history of human communication, and other communication topics. Students will learn advanced techniques of planning a public address, dealing with stage fright, researching a topic, and presenting informative, persuasive, and entertaining (special occasion) speeches. Students will be held to professional standards. Students are exposed to a variety of learning strategies and 21st century skills. This class is recommended for 9th and 10th grade students and meets a single semester of graduation credit.

Elective Classes

American Literature

Length: 1 semester

Prerequisite: Eng II

American Literature is an intensive one semester, college preparatory course that engages students in the critical reading and analysis of literature from the 19th century to the present. The close reading of poetry, novels, plays, and short stories will enable students to deepen their understanding of literary structure, style, themes and the application of literary terminology. Students are required to respond critically to poetry and stories, along with regular participation, assignments, quizzes, and short answer essay tests.

Basic Composition

Length: 1 semester

Prerequisite: Eng II

Basic Composition will prepare high school students for pre-college and college writing. Students will learn a writing process examining how to support ideas, cite evidence, organize ideas and evidence in a variety of ways, and argue effectively. Students should expect to write at least one paper per month. The course will focus on the Common Core writing standards.

Creative Writing

Length: 1 semester

Prerequisite: Eng II

This class will introduce students to the process and techniques of creative writing. Students will experiment with various types of writing, including the writing of fiction and poetry. Class readings will expose students to various writing styles and provide examples of the successes and strategies of other writers. Class time will be spent discussing the writer's craft, the assigned readings, and student writing. Through writing exercises, students in this course will learn to craft dialogue, scene, memory, and detail. By applying these skills, students will write several short stories throughout the semester, each developing particular aspects of prose fiction. Students should expect to read and discuss contemporary short fiction, to write prose exercises and their own original short stories, and to learn about and participate in workshopping. The craft

and process of poetry writing from a poet's initial draft to its d revision will also be featured. Class readings will help to make students familiar with traditional and free verse forms, current writing styles, and aesthetic issues. Class time will be spent discussing the poet's craft, the assigned readings, and student writing. Included: poetry, experimental fiction, skits/dialogue, short story, short short fiction, 1st person/3rd person, and narrative fiction.

Contemporary Literature

Length: 1 semester (Spring Semester)

Prerequisite: Eng II

This literature class studies novels and autobiographical texts written post World War 2. The readings reflect the times, both socially and philosophically, in which they are set. Students determine the underlying assumptions and values within the selected works, reflect upon the influence of societal events and social attitudes, and compare the points of view of various authors. Oral discussion is an integral part of literature courses, and written compositions are required.

Works that may be read in the class include:

<u>The Things They Carried</u>	<u>Rocketboys</u>
<u>The Catcher in the Rye</u>	<u>How the Garcia Girls Lost their Accents</u>
<u>The House on Mango Street</u>	<u>Daniel Half-Human</u>
<u>Twelve Angry Men</u>	<u>The Land of Permanent Goodbyes</u>

Media Literacy Production

Length: 1 semester

Media Literacy Production is a single semester course that produces a bi-weekly Highland news show. The course combines English Standards in Speaking and Listening, and Writing. Students learn how to create news stories from idea to finished product using video editing techniques, team planning, time management, and skill focused learning. The class has a student limit. Students who are not able to self direct and self monitor their working time should not take this class.

Professional Language Arts

Length: 1 semester (Fall Semester)

Prerequisite: Eng II

Professional Language Arts is a one semester class covering writing skills for everyday business use. The class studies: formal communication in the workplace, giving instruction, descriptions of process and mechanisms, using forms, summarizing, job application, presenting reports, and professional writing.

These skills will be practiced and applied using a variety of methods including online sources, text, and visual media.

Vocabulary will also be included in the curriculum.

Text: Communicating for Success Hyden, Jordan, Steinauer

Journalism-Yearbook/Annual

Length: 1 semester may take multiple years

First semester English credit, then Non - English Credit Elective

Annual creates the yearbook. Students will be responsible for taking pictures of school events and activities, and using technology to create pages for the yearbook, writing and editing copy, creating layouts, carrying themes throughout the book, collaborating with the yearbook team and instructor. Pages are evaluated on style, photo selection, and captioning (spelling and punctuation), continuation of theme and continuity..

Foreign Language – Spanish

Spanish I

Length: 1 year

In Spanish 1, students begin developing a foundation in listening comprehension, speaking, reading, and writing. Language is learned through the daily practice of these four skills within the context of a variety of topics and cultural comparisons. Some of these topics include: greetings and basic conversations, numbers, alphabet, telling the date and time, describing seasons and weather, clothing, food, school, holidays and traditions, and pastimes. Students learn basic vocabulary and grammar as well as pronunciation. Students participate in a variety of activities and complete daily assignments to develop proficiency at this level. Speaking, reading, writing, listening, and cultural comprehension skills are regularly assessed throughout the year.

Spanish II

Length: 1 year

Prerequisite: At least a C grade in Spanish I

In Spanish 2, students expand their knowledge of the language while continuing to explore cultural perspectives. In this course they will review and build upon their study of everyday topics, continuing to increase their proficiency in speaking, listening, reading, and writing. Students learn how to discuss family and celebrations, activities around the house, their extracurricular activities and pastimes, daily routine, shopping, past events, and driving/giving and receiving directions. Students learn new vocabulary and grammatical structures to help them expand their conversations and writing. Speaking, reading, writing, listening, and cultural comprehension skills are regularly assessed throughout the year. Much of the class is conducted in Spanish and students are expected to use the language as much as possible.

Spanish III

Length: 1 year

Prerequisite: At least a C grade in Spanish II

In Spanish III students review and expand upon previously learned skills, working to increase their proficiency in reading, listening, writing, speaking, and cultural studies. By the end of the year the students will have a greater level of confidence in their ability to speak and write in Spanish, as well as understand written and spoken Spanish with greater ease. Topics of study include talking about your childhood, natural disasters, heroic acts, medical emergencies, travel, cooking, and careers. The class is primarily conducted in Spanish and students are expected to use the language as much as possible. Speaking, reading, writing, listening, and cultural comprehension skills are regularly assessed throughout the year across a variety of topics.

Spanish IV

Length: 1 year

Prerequisite: At least a C grade in Spanish III

In Spanish 4, students review and expand upon previously learned skills, working to increase their proficiency in reading, listening, writing, speaking, and cultural studies. At the end of the year the students will have a greater level of confidence with their ability to speak and write in Spanish, as well as understand written and spoken Spanish with greater ease. Topics include outdoor adventures, Hispanic art and artists, health and nutrition, personal relationships, the environment, and literature. The class is primarily conducted in Spanish and students are expected to use the language as much as possible. Speaking, reading, writing, listening, and cultural comprehension skills are regularly assessed throughout the year across a variety of topics.

Math

Algebra I

Length: 1 year

Prerequisite: Math 8

Algebra is the study of relationships between known and unknown quantities and the concepts arising from them. This Algebra I course is the foundation for high school mathematics courses. It is the bridge from the concrete to the abstract study of mathematics. Topics include one variable statistics, linear equations/ inequalities/systems, two variable statistics, functions, exponential functions, and quadratic functions. Real-world applications are presented within the course content and a function's approach is emphasized.

Geometry

Length: 1 year

Prerequisite: Algebra I

This is a one year course to develop and practice problem-solving skills using inductive and deductive reasoning. Students are guided through all the conceptual and working levels of the process using geometry. It uses two and three-dimensional geometric shapes (points, lines, planes, triangles, polygons, circles, and solids) and examines their properties, measurements, and mutual relations in space.

Informal Geometry

Length: 1 year

Prerequisite: Algebra I

This is a one year course to develop and practice problem-solving skills using the basic geometric concepts in a step-by-step approach. Definitions, postulates, axioms, and theorems are included using simple proofs. It uses two and three-dimensional geometric shapes (points, lines, planes, triangles, polygons, circles, and solids) and examines their properties, measurements, and mutual relations in space.

Mathematical Applications

Length: 1 year

Prerequisite: Algebra I and Geometry or Informal Geometry

Math Applications is a project based course applying concepts learned in Algebra 1 and Geometry. This class is designed to show students how math concepts they have learned previously can be used in the real world. Students may choose to take Algebra II the following year if they are interested.

Algebra II

Length: 1 year

Prerequisite: Algebra I and Geometry

In Algebra II, students will expand and apply the algebra and geometry skills they have to more complex functions and concepts. Topics will include Sequences and Functions, Polynomials and Rational Functions, Complex Numbers and Rational Exponents, Exponential Functions and Equations, and Statistical Inferences. Additional topics to be covered if time allows include Trigonometric Functions and Transformations of Functions. The course will provide students with the algebraic concepts essential for higher-level mathematics courses.

Pre-Calculus

Length: 1 year

Prerequisite: Algebra II

In Pre-Calculus, students will expand and apply the skills learned in Algebra II. Topics will include linear functions, polynomial functions, rational functions, exponential functions, logarithmic functions, and trigonometric functions. In addition, students will learn trigonometric equations. If time allows, students will learn about vectors, matrices, conic sections, polar equations, parametric equations, and will be given an introduction to calculus. Problems are linked to real-world applications with an emphasis on graphing, vocabulary, and technical writing. This course is designed to prepare students for calculus and college mathematics.

Calculus

Length: 1 year

Prerequisite: Pre-Calculus

Calculus is the mathematics of change – velocities and accelerations. Calculus is also the mathematics of tangent lines, slopes, areas, volumes, arc lengths, centroids, curvatures, and a variety of other concepts that have enabled scientists, engineers, and economists to model real – life situations. Although precalculus mathematics also deals with velocities, accelerations, tangent lines, slopes, and so on, there is a fundamental difference between precalculus mathematics and calculus. Precalculus mathematics is static, whereas calculus is more dynamic. The idea that separates calculus from precalculus mathematics is the limit process. You may or may not have already studied some limit properties. We will begin with those ideas and build upon them to lead us to a new calculus formulation, such as derivatives and integrals.

Physical Education

Health

Length: 1 semester

Graduation Requirement

In Health, we will learn about health promotion and disease prevention, demonstrate the ability to access valid health information and health-promoting products and services, demonstrate the ability to practice health-enhancing behaviors and reduce health risks, analyze the influence of culture, media, technology, and other factors on health. In addition, students will demonstrate the ability to use interpersonal communications skills to enhance health, demonstrate the ability to use goal-setting and decision-making skills to enhance health, and demonstrate the ability to advocate for personal, family, and community health.

Physical Education

Length: 1 semester

- Availability for all students, not just the athletically inclined.
- Increasing student physical fitness and developing an understanding about physical activity's role in good health and a productive life.
- Assessing students on their personal progress toward fitness, social, cognitive and physical activity goals.
- Incorporating technology on a regular basis.
- Extending beyond the walls of the gymnasium.
- Teaching fitness, healthy active lifestyles and wellness (focusing on lifetime activities). »
Change the rules and adapt games to ensure full participation for maximum activity minutes

Science

Required Classes All graduating Students must complete 3 years of Science, including Biology and Earth Science. Students may then take EITHER Physical Science (1 year) OR Physics (1 year) AND Chemistry (1 year). (recommended for students planning on a science pathway in college)

Biology

Length: 1 year

Taken Freshman Year/1st in Sequence

Biology is the study of life. This broad topics course is organized into various levels, or different ways that one could study life. The course covers life processes and interactions at the cellular, organism, population, and ecosystem levels. Course content encompasses interrelationships of living things, levels of biological organization, cellular biology, biochemistry, genetics, and evolution. Required course.

Earth Science

Length: 1 year

Taken Soph year/2nd in Sequence

Earth Science will explore the history and nature of Science as a way of knowing. The primary topics we will explore include Astronomy, (Moon, solar system, galaxies and the universe), Earth Science (Geology, weather, climate, oceans), and Environmental science (human impacts and interactions with the earth). Required course.

Physical Science

Length: 1 year

Prerequisite: Biology/Earth Science

In this class you will examine everyday phenomena and try to explain for yourself why things around us behave in the way that they do. You will conduct and in many cases design experiments that will enable you to understand the laws of nature and how they affect you. One of the goals of this course is to enable you to use what you know to solve problems for yourself. Physical science deals with things that we all experience every day from a physics perspective followed by a chemistry standpoint.

[Science Requirement Pathways](#)

Elective Classes

Chemistry

[Chemistry Course Description](#)

Length: 1 year

Prerequisites: Biology, Algebra I

This year-long course exposes students to the composition of substances (both natural and man made materials). Through intensive lab work and **problem-solving**, students learn about the periodic table of the elements, chemical reactions, and basic laws of nature. Most lab work is done in small groups. The course will stress the development of higher-order thinking skills, laboratory skills and inquiry, and also investigations into chemistry-related issues in society.

Physics

Length: 1 year

Prerequisite: Algebra 2. B or better OR permission from Instructor

This course uses a modeling approach and graphic analysis to study mechanics topics including linear and rotational motion, forces, energy, work, and mechanical advantage. The course will also cover other topics in physics including electricity, electromagnetic and compression waves, nuclear physics and other topics may also be covered. Hands-on activities will be used to help the students develop the conceptual ideas needed to build the mathematical models. Elective course. Highly recommended for any college bound junior or senior who may pursue a career in the sciences, Math, or Engineering. Also helpful for those pursuing many of the applied trades.

Robotics

[Robotics Course Description](#)

Length: 1 year (may be taken for multiple years)

(note may not be taken in place of required courses)

Principles of Technology is a student led, project-based course using an assortment of building materials. Students will develop problem solving skills as they work to design, program, and construct a robot. Team members will also be responsible for obtaining sponsorship and taking part in other social media and community outreach projects. Everyone will be responsible for documenting their work in the team's engineering notebook. If you don't document something, it never happened. The team (class) will compete with other teams from Iowa and possibly from across the U.S. and the rest of the world as part of the First Tech Challenge. You may need to work on tasks outside of the school day. We will likely have build meetings and drive/competition practices after school or on some Saturdays during the year. For more FTC competition information, check the FTC website: <http://www.usfirst.org/roboticsprograms/ftc>

Aerospace Engineering 1, 2, 3, and 4

[Aerospace Engineering Course Description](#)

(note should not be taken in place of Chemistry or physics)

Classes are offered in a 4 year sequence.

Fundamentals of Aerospace Technology (Aerospace I)

Full year course

This project-based learning course engages students who are curious about aviation and aerospace careers. This course will introduce students to an engineering design process, tools to collect and analyze data, the science of aviation, materials and structures, and safety. Students will participate in real-world experiences such as designing, building and testing a pilot seat, kite, straw rocket and launcher, motor-powered rocket and a model glider.

Advanced Aerospace Technology (Aerospace II):

Full year course

Prerequisite: Fundamentals of Aerospace Technology

This course builds on the foundation of Course 1 and engages students in applying the design process, using tools to collect and analyze data, exploring a deeper level of the science of aviation and discovering how quality control systems work in the aviation field. Students will work collaboratively in teams to design, build and test a wing; plot a course for a plane to take off and land; design, build and test a wing attachment assembly; test materials under stress; and design, build and test an electric-powered plane. Students will demonstrate their newly acquired knowledge and skills by presenting their innovative ideas, techniques and solutions to business and industry partners.

Aerospace Engineering Applications (Aerospace III):

Full year course

Prerequisites: Fundamentals of Aerospace Technology, Advanced Aerospace Technology

This project-based learning course is for students who have successfully completed Courses 1 and 2. Students will learn about systems such as flight control, remote-control vehicles and the virtual

world. Students will learn to fly using flight simulators. They will work collaboratively to propose a shift from a VOR navigation system to a GPS system and determine the cost savings. In addition, students will develop rotor blades for helicopters and design and program an unmanned flying vehicle.

Astronautics Engineering Applications (Aerospace IV):

Full year course

Prerequisites: Fundamentals of Aerospace Technology, Advanced Aerospace Technology, Aerospace Engineering Applications

Students in this capstone course will focus on outer space and underwater applications. During the six projects, they will work collaboratively to design, build and test a laser communication system; develop a plan for space survivability in hostile environments; and utilize software to create a three-dimensional model of a satellite orbit and a team remote vehicle for underwater exploration. Depending on articulation agreements or state policy, students who successfully complete the course may be able to earn dual credit.

Social Studies

Required Classes

Government

Length: 1 semester

Grade: 12

In order for every student to have the knowledge, skills, and motivation needed to participate in the American democratic form of government, this course is essential to an informed citizenry and required by the State of Iowa for graduation. Knowledge of the structure, functions, and purposes of the 3 branches of government are foundational to develop the skills necessary to become an active, participating citizen.

World History

Length: 1 year

Grade: 10

A comprehensive view of the history of the world will be discovered beginning with the dawn of man and the advancement of civilization to the “Modern Period.” The focus of the course is on a world-view but includes the history of the western world. This basic course will prepare students for more advanced historical studies late in high school and college.

US History

Length: 1 year

Grade: 9

The focus of study in this freshman level course is a view of American history from 1877 to the issues of the present. The course begins with the post-Reconstruction, industrial period of American history and chronicles the social, political, economic, and cultural development of “modern America.” The study of the American past will provide the student with an

understanding and awareness of American history and its effect on modern U.S. society and politics. This course will be taught using Standards Based Grading in association with the Iowa Common Core.

Elective Classes

Economics

Length: 1 semester

Grade: 11-12

The general objective of this course is for students to master fundamental concepts, appreciate how the principal concepts of economics relate to each other and understand the structure of economic systems. Students will use economic concepts in a reasoned, careful manner in dealing with personal, community, national and global economic issues. They should learn to make reasoned decisions on economics.

Sociology

Length: 1 semester

Grade: 10-12

This course introduces the scientific study of human society, culture, and social interactions. Topics include socialization, research methods, diversity and inequality, cooperation and conflict, social change, social institutions, and organizations.

[Sociology Course Information](#)

Psychology

Length: 1 semester

Grade: 10-12

This course provides an overview of the scientific study of human behavior. The course will focus on key concepts such as investigating the different perspectives of the world within psychology, social psychology, applying psychology to everyday life, and conducting psychological research.

[Psychology Course Information](#)

World Geography

Length: 1 semester

Grade: 10-12

This is a semester long, elective course in the study of World Geography. The focus of this class is on the subject of geography, which, in no small way, is the study of everything on Earth. It covers everything from landscapes and rainfall to people and places. Different sections will see different standards utilized with an emphasis on various areas of study (standards) that are pertinent to world geography.

[World Geography Course Information](#)

World Contemporary Issues

Length: 1 semester

Grade: 10-12

This is a semester long, elective course in the study of World Contemporary Issues. The focus of this class is on the subject of world issues that affect our society. We cover how to research, APA citation style, and writing academic style papers.

Interested in taking Kirkwood classes?

Student Proficiency Requirements:

To participate in SYP programming, students must meet the academic requirements of both the school district and postsecondary institution. At the college level, students must meet any assessment requirements of the postsecondary institution including any placement exam requirements of the institution. While Iowa community colleges are open access institutions, they usually have college placement exam requirements, often including mandatory minimum cut scores for enrollment in certain courses. Early placement testing benefits students by helping them better understand their progress toward college readiness much earlier than at the time of matriculation.

At the school district level, students must demonstrate proficiency in reading, mathematics, and science to participate in SYP programming.

Previously, eligibility was primarily determined using the most recent administration of the Iowa Tests of Basic Skills (ITBS) or Iowa Tests of Educational Development (ITED), or an alternative measure of proficiency adopted by the school board. For the ITBS/ITED, students had to score at or above the 41st national percentile rank (NPR) in each of the three subject areas.

ALTERNATE MEASURE OF PROFICIENCY:

- College Level Reading score of 73 and College Level Writing score of 82 on Kirkwood Accuplacer placement test will determine eligibility for Arts and Science I. ACT English score of 18 will also determine eligibility for Arts and Science I.
- College Level Reading score of 70 and a College Level Writing score of 70 on Kirkwood Accuplacer placement test will determine eligibility for Arts and Science II, Pre-Business, Companions, etc. An ACT English score of 15 will also determine eligibility.

Kirkwood Plan of Study

[Kirkwood Plan of Study 2025-26](#)