



ST. GEORGE ACADEMY

2020-2021
School Course Catalogue

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Career and Technical Education Department

Advanced Principles of Electronics

Elective grades 8-12

A semester long class where student will learn expand electronics circuits principles, and have the opportunity to build circuits like: amplifiers, control circuits, etc. *Prerequisite: Principles of electronics

Digital Literacy

Required grade 8

This course is a foundation to the digital world that provides a broad understanding of key applications, computing fundamentals, and living online.

Students have the opportunities to use technology and develop skills that promote creativity, critical thinking, productivity, and collaboration in the classroom and day-to-day life.

CS Principles

Required grade 9

A requirement for graduation intended to advance students from being computer users to being computationally literate creators. To achieve this, the course includes competencies associated with the field/discipline of computing, aligned to current trends in technology, provide problem solving, reasoning, communication, and computational thinking.

Computer Programing I

Elective grades 8-12

An introductory course in program engineering and applications. The course introduces students to the fundamentals of computer programming. students learn to design, code, and test their own programs while applying mathematical concepts. Teachers introduce basic coding concepts.

Computer Programing II

Elective grades 8-12

This course builds on the concepts introduced in Computer Programming 1, This course introduces students to more complex data structures and their uses, including sequential files, arrays, and classes. Students learn to create more powerful programs within a specific programming language. Java, Python, C++, C#.

Engineering

Elective grades 8-12

Principles of Engineering (POE) is a high school-level survey course of engineering. The course exposes students to some of the major concepts that they will encounter in a post-secondary engineering course of study. Students have an opportunity to investigate engineering and high-tech careers. POE gives students the opportunity to develop skills and understanding of course concepts through activity, project, and problem based (APPB) learning. Used in combination with a teaming approach, APPB learning challenges students to continually hone their interpersonal skills, creative abilities, and problem-solving skills based upon engineering concepts. It also allows students to develop strategies to enable and direct their own learning, which is the ultimate goal of education.

Game Development Fundamentals

Elective grades 8-12

This course is designed to provide students with knowledge and project-based experience of fundamental gaming development concepts relating to STEM. These concepts include game design, scripting, creation of digital assets, graphic resources, animations, understanding hardware, problem solving, critical thinking, collaboration, and project management.

Graphic Design – Offered Select Semesters

Elective grades 8-12

This is a course in the applied visual arts that prepares individuals to use artistic techniques to effectively communicate ideas and information to business and consumer audiences via illustrations and other forms of digital or printed media. Instruction includes training in concept design, layout, paste-up, and techniques such as engraving, etching, silkscreen, lithography, offset, drawing and cartooning, painting, collage, and computer graphics.

Intro to Programming

Elective grades 8-12

Syntax! Functions! Variables! Learn them all with Intro to Programming! Javascript is the perfect language to start out your programming career.

You will learn to

write simple programs and the universal basics of programming in any language. You will even write your own game!

Principles of Electronics

Elective grades 8-12

A semester long class where student will learn basic electronics circuits principles, and have the opportunity to build circuits like: amplifiers, control circuits, etc.

Robotics

Elective grades 8

This is a class to prepare the students with a lab-based, hands-on curriculum combining electrical, mechanical and engineering principles. A rigorous study and application of electrical concepts will include sources of energy, electrical safety, use and identification of basic electronic components, sensors, and actuators. In the sequence students will learn to design, build, program, and control robotics devices.

VEX Robotics

Elective grades 9-12

This class is a continuation of the Robotics class. Students will delve more into the Engineering concepts that will include mechanical design, prototype development, design testing, programming, and proper engineering documentation.

Web Development Capstone

Elective grades 8-12

This course builds on the concepts introduced in Web Development 2. Some concepts for discovery and mastery include: front-end (HTML5, CSS, Bootstrap, JavaScript, JQuery), Foundation paradigms (OOPS, Design Patterns, Object Modelling, JSON, AJAX), MEAN Stack (MongoDB, Express Framework, AngularJS, Node.js), Data Exchange (HTTP, Websockets), Development & Environment tools & resume & Interview prep.

Web Development II

Electives grades 8-12

This course is designed to guide students in a project-based environment in the development of up-to-date concepts and skills that are used in the development of today's websites. Students learn the fundamentals of how the internet works. They learn and use the basic building blocks of the World Wide Web: HTML5 & CSS. Students follow the steps to create a website by planning, designing, developing, deploying, and maintaining their website projects. Students learn and use different scripting technologies to create more dynamic and interactive websites.

Fine Arts Department

Art Foundations – I & II

Elective grades 8-12

This course is designed for students to learn and develop art-related skills and techniques. In this course students will experiment with the art mediums of: graphite, charcoal, ink, collage, and mixed media. .

Drawing I – Offered Select Years

Elective grades 8-12

Focus is on drawing skills. Students will focus on black and white or monochromatic rendering from life, pictures, masterworks, and imagination. We will learn multiple drawing techniques and experiment in the media of graphite, charcoal, and pastels.

**Prerequisite: Art Foundations*

Painting – Offered Select Years

Elective grades 8-12

This course is designed for students to develop skills and techniques to work in multiple painting mediums.

**Prerequisite: Art Foundations*

Studio Art – Offered Select Years

Elective grades 8-12

This course is for students interested in a focused study in Art. This course is based on the student creating a body of quality artwork in the medium of their choice. No prerequisites required.

Unconventional Art

Elective grades 8-12

This course delves into various media that are not considered traditional art. Students will learn about fiber arts, paper crafting, markers, and different ways to use acrylic paint as well as how to utilize the elements and principles of art and design in their work.

Health and Wellness Department

Child Development

Elective grades 8-12

Students will understand the aspects of child growth and development, positive guidance techniques, and child-related issues. Learning activities, observation techniques and a lab will be included.

Dance – Offered Select Years

Elective grades 8-12

In this course students will learn about the history and terminology of dance. Students will also learn how to execute and perform dance techniques and routines in the three foundational styles of dance, including ballet, jazz, and modern dance.

Health 8th

Required grade 8

Health 10th – Offered on Wednesdays

Required grade 10

The health education curriculum emphasizes developing positive, life-long, health-related attitudes and behaviors. The primary goal of this course is to develop the knowledge, skills, and behaviors essential to become health-literate: understanding the medically accurate principles of health promotion, disease prevention and support healthy living.

Participation Skills/Fitness for Life

Required grade 9, elective all grades

Includes exploration into various forms of physical exercise and sports, as well as a solid understanding of how nutrition affects brain, body and emotional functioning. Students will be taught effective ways to manage stress, reduce toxic load and how to function as a whole person in various situations and circumstances.

Language Arts and Communications Department

Academic Approach to the Supernatural

Elective grades 11/12

Semester one of this class will focus on tales of the supernatural from a Folklore perspective. We will not be examining if the stories are true or not, but rather what the stories say about the people and cultures that tell them. Semester two of this class will focus on the use of pseudo-science to explain "prove" supernatural phenomenon. As with semester one, the goal of the class is not to determine if the phenomenon discussed are real, but rather, to examine the methods used to explore the phenomenon.

Academic Writing (Language Arts 9)

Required grade 9

Focus is on the structure of academic writing, including thesis, support, citations and argument. Students will be introduced to the socratic seminar and techniques of questioning. Students will learn to apply understanding in non-fiction contexts, compare/contrast concepts and extrapolate theme, symbol, tone and style in a variety of works.

**Prerequisite: Foundations of Writing or instructor permission.*

Foundations of Writing (Language Arts 8)

Required grade 8

Focuses on writing fundamentals. Students will be introduced to brainstorming and outlining techniques, fundamental writing structure, polish grammar and MLA format. Through literature experience, students will summarize and analyze multiple texts, accurately applying the elements of style and tone.

Mythology (Language Arts 11/12)

Core grade 11/12

This course delves into the themes of ancient civilizations and explore parallels to our modern social issues. We will interpret the hero through Joseph Campbell and Jungian Archetypes. We will analyze modern media through the lens of ancient works. We will also compare eastern and western thinking, deducing why our modern cultures can be so divergent.

**Prerequisite: World Literature and Research Writing or instructor permission.*

Public Speaking

Elective grade 8-12

Students will learn the practical skill of public speaking, including techniques to lessen speaker anxiety, and the use of visual aids to enhance speaker presentations. This course will help students to speak publicly through theory and more importantly through practice.

Public Speaking (Language Arts 8)

Required grade 8

Students will learn to express themselves verbally and become comfortable speaking in front of groups of people. Students will learn to develop ideas for speeches, organize those ideas, and present those ideas verbally to an audience.

Research Writing (Language Arts 10)

Required grade 10

The primary purpose of this course is to teach students proper researching skills across multiple disciplines. Students will apply understanding, compare and contrast differing perspectives and synthesize a final paper from multiple sources.

Students will practice proper grammar and syntax.

**Prerequisite: Academic Writing or instructor permission.*

Writing Essentials Lab (Language Arts 10 & 11)

Support grades 8-12

Students can add this course as a support tool to focus on essential skills of writing. Instructors will help students with current language arts assignments, practice technical writing skills, and improve reading comprehension.

World Literature (Language Arts 10)

Required grade 10

This course will study literature from around the globe. Rather than following any chronology, the course will focus on different themes such as coming of age, survival, love, and judgment and how they are presented around the world. Through these different themes, students will master different literary devices such as symbol, tone, and style. Discussions and written analyses are central to this course.

**Prerequisite: Academic Writing or instructor permission.*

Foreign Language Department

ASL I

Elective grades 8-12

American Sign Language I is an introduction to American Sign Language (ASL). Includes basic grammar, vocabulary, fingerspelling, numbers, and cultural information related to the Deaf Community.

ASL II/III

Elective grades 9-12

ASL II is a continuation of ASL I. This course is designed to continue development of American Sign Language expressive and receptive skills, grammar, vocabulary, cultural awareness, and related terminology.

**Prerequisite: ASL I or instructor permission.*

ASL Concurrent Enrollment

Elective grades 11-12

For beginning students interested in American Sign Language. Native-speakers and students who have acquired proficiency in this language through extended residence, military service, church missions, or other methods may not enroll in this class. Emphasizes principles, methods, and techniques of communicating manually with deaf individuals. Teaches basic receptive and expressive skills, overviews basic grammatical structure in signing, and explores Deaf Culture. A variety of teaching methods are employed, including drills, videos, and work in pairs or groups. This course partially qualifies students to receive an Associate of Arts degree or Bachelor of Arts degree for some majors at some Universities, including Dixie State University. Successful completers are prepared to take ASL 1020.

German I

Elective grades 8-12

While building a German vocabulary is important, so is grammar. We will spend some time on grammar. A large vocabulary is of little use if the student is unable to understand how the Germans use grammar. Grammar is the key to putting words together, making the incomprehensible understandable. We will also spend time on German history, culture and the always important do's and don'ts.

Japanese I

Elective grades 8-12

Students will obtain fundamental skills and knowledge of Japanese language and culture including; listening, speaking, writing, reading and non-verbal communication. Additionally, students learn elementary syntax, semantics, phonology and pragmatics in the Japanese language. This course emphasizes speech and listening acquisition

Japanese II

Elective grades 9-12

Students will expand on fundamental skills and knowledge obtained in Japanese 1 including; listening, speaking, writing, reading and non-verbal communication. Additionally, students will learn intermediate syntax, semantics, phonology and pragmatics in the Japanese language, and beginning kanji. This course emphasizes speech and listening acquisition as well as reading and writing.

**Prerequisite: Japanese I or instructor permission*

Spanish I

Elective grades 8-12

An entry level Spanish speaking and writing course. Will introduce students to basic conversational skills and vocabulary. Students will also be introduced to the basics of cultures that speak Spanish.

Spanish II/III

Elective grades 9-12

An intermediate level Spanish speaking and writing course. Will introduce students to basic conversational skills and vocabulary.

**Prerequisite: Spanish I or instructor permission.*

German Cont.

Whether you are a *Wunderkind* (child prodigy) or merely *nur sterblich* (merely mortal) like your instructor, you're going to like this course.

Mathematics Department

AP Calculus AB

Elective grades 11-12

This course will engage students in rigorous study in order to prepare for the AP Calculus AB exam. Students will explore fundamental definitions of Calculus concepts, including limits, derivatives and integrals, and apply them in various circumstances. Students will explore mathematics through technology and explain complex processes verbally and in writing. *Prerequisite: C or better in Secondary Math III*

Calculus II

Elective grades 11-12

Students will engage in the second half of college prep Calculus. Students will review fundamental definitions of Calculus concepts and new forms of differentiation and integration. Students will explore mathematics through technology and explain complex processes verbally and in writing. *Prerequisite: C or better in AP Calculus AB.*

Introductory Statistics

Elective grade 10-12

Statistics is a branch of mathematics that explores concrete connections with everyday living. Students will develop critical thinking skills with lifelong application. Students will gather, graph, examine, compare and interpret data using technology, including graphing calculators or computer statistics software. They will describe data and make informed decisions and predictions. *Prerequisite: C or better in Secondary Math II or acceptable score on placement test*

Mathematics 8

Required grade 8

This course is a foundational math course to prepare students for success in high school. Students will have the opportunity to increase their understanding in Algebra, Geometry and Statistics. The Algebra section of this course will focus on solving equations, understanding rates of change and function analysis. The Geometry section will include calculations with area, volume and distance. Also included will be coordinate geometry and properties of polygons and circles. Finally, students will learn how to

Secondary Mathematics I

Required grade 9

Students in this course will explore fundamental concepts of Algebra and Geometry including functions, polynomials, triangle theorems, trigonometry, and apply them in various circumstances. Students will explore mathematics through technology and explain complex processes verbally and in writing. Students are expected to master Algebra and Geometry vocabulary and formulas throughout the duration of the course. *Prerequisite: C or better in Math 8 or acceptable score on placement test*

Secondary Mathematics II

Required grade 10

Students will engage in intermediate mathematical processes and notations to solidify concepts in algebra, trigonometry and statistics, including quadratics, polynomials, exponential and rational functions, and apply these concepts in various circumstances. Students will explore mathematics through technology and explain complex processes verbally and in writing. *Prerequisite: C or better in Secondary Math I or acceptable score on placement test*

Secondary Mathematics III

Required grade 11

Students will engage in advanced mathematical processes and notations to solidify concepts in algebra, trigonometry and statistics, including quadratics, rational functions, and logarithms and apply these concepts in various circumstances. Students will explore mathematics through technology and explain complex processes verbally and in writing. *Prerequisite: C or better in Secondary Math II or acceptable score on placement test*

Mathematics 8 Cont.

construct logical arguments using congruence and similarity of triangles and other geometric properties. The Statistics section will further build on students' previous understanding of measures of central tendency, variation, and data analysis.

Science Department

8th Grade Science - Integrated Science

Required grade 8

This is a year-long required course. It will cover benchmarks that include physical and chemical changes, changes in matter and energy, chemical reactions, plant and animal processes, rock and fossil formation, and changes to the earth's surface.

AP Physics I, II or C

Elective grades 9-12

The course is divided in four blocks: mechanics, heat/thermodynamics, electricity/magnetism and waves (light and sound). The difference from regular physics class is that in advanced physics students will be taught the same concepts but using more advanced mathematical and modeling applications.

Prerequisite: C or better in Secondary Math II or instructor permission

Astronomy

Elective grades 8-12

The course objective is to provide students with a fundamental understanding of the principles of astronomy. Students will learn about the Solar Systems, Motion of the Planes, Stars, Galaxies, and the Universe in general.

Biology

Required grade 11

This is a year-long required course. It will cover topics essential to the science of modern biology. These include biochemistry, cell structure and function, energy and metabolism, genetics, evolutionary processes, and ecology.

Chemistry

Required grade 10, elective grades 11-12

This course primarily features principles of general chemistry. Some examples of topics to be covered include atomic and molecular structure, thermodynamic analysis, chemical bonding, relative reactivity, dynamic equilibrium, and acid-base interactions.

Prerequisite: Secondary Math I

Human Anatomy and Physiology

Elective grades 8-12

Human Anatomy and Physiology is a laboratory-based course that investigates the structure and function of the human body. Topics covered will include the basic organization of the body and major body systems along with the impact of diseases on certain systems. Students will engage in many topics and competencies related to understanding the structure and function of the human body.

Physics

Elective grades 10-12

This course is designed to be a conceptual, non-mathematically focused introduction to physics and science. Some concepts covered include units and measurement, motion, Newton's Laws, gravity, electrostatic forces, energy, waves, and the electromagnetic spectrum.

Scientific Reasoning

Required grade 9

This course will explore scientific articles and topics to teach students how to approach reasoning and thought in science. It will also address graph, chart, and table analysis and other scientific skills necessary for the ACT.

Social and Behavioral Science Department

General Financial Literacy/Economics

Required grade 12, elective grade 11

This course covers stocks, bonds, the financial marketplace, investing, budgeting, time value of money and risk management. Students learn to avoid common pitfalls including the improper use of debt, impulse buying. Content covers hidden economic forces including inflation, coercive practices, cyclical exposure, fraud, college and career planning, retirement, and charitable giving.

US Government

Required grade 12

Constitutional Principles is a one-semester (fall) course required for graduation. Students will explore theories of human organization and power through studying classical political thought and American governmental structures outlined in the US Constitution. This course prepares students for the USCIS Civics Test (state requirement for graduation).

World Geography

Required grade 9

World Geography is a one-semester (fall) course required for graduation. This course utilizes geographic and political-science methods as tools for students to understand our world. Students will examine environments, populations, and political structures using cartographic (map) sources. Course content combines elements of natural history with resource allocation in understanding the earth's climate, boundaries, and ecosystems.

World History

Required grade 10

This course charts the origins of human existence from 10,000 BC to Columbus' voyage in 1492. Students will examine how unifying themes of world civilizations have developed over time through global trade, philosophical inquiry, religious diffusion, and the rise of Empires. Core content addresses the development of civilizations, the dominance of Asian power centers, and the rise of Europe.

US History I (8th Grade)

Required grade 8

Focus is 18th and 19th century settlement of North America and early development of the United States. Topics include: European Exploration in the Western hemisphere, North American Colonization, American Revolutionary War, US Constitution, Westward Expansion, US Civil War and Reconstruction. Geography and current events are woven throughout the course.

US History II

Required grade 11

Foundations of Modernity is a one-semester (fall) course, covering American history from the crisis of the Civil War (1860) to the end of the First World War. Special attention will be paid to the inter-linked phenomenon of industrialization, immigration, urbanization, and world-trade networks in the rise of the United States as a world power. Students will explore the development of a unique American identity in the shifting of global frontiers and the rise of radical ideologies.

Other Offered Courses

Facilities Conservation

Elective 8-12

In this course students will learn basic cleaning and maintenance techniques for serving a commercial building. Students will be give weekly responsibilities like wiping the commons area, removing trash, sweeping and mopping. Students will also have the opportunity to complete specific projects around the school building and grounds.

Released Time

Elective grades 9-12

The Released Time program allows students time during the school day to leave campus to attend a program of religious study of their choice. Students are expected to attend their chosen courses and return to campus in a prompt manner.