

Burrton High School

Enrollment Catalog



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Enrollment Instructions

Enrollment is a collaborative effort between you, your family, your teachers, your counselor, and the Burrton High School administration. Students and parents are encouraged to read course descriptions, graduation requirements, and prerequisites needed to enroll in certain courses.

Burrton High School will enroll students based on the information provided to our counseling department from students, parents and faculty. Master schedules and teacher assignments can vary based on information received from enrollment so please make sure you carefully consider all classes before you finalize enrollment.

If any student or parent has any questions concerning any course please contact the school counselor, or an administrator.

Enrollment Steps

1. Develop your Individual Plan of Study to map out your 4-year coursework at the high school level.
2. Review your transcript and Graduation Progress Report to make sure you have completed courses for your grade level. Select any courses that will complete missing requirements.
3. Study the enrollment catalog to help you with course selections and communicate with teachers of classes you may be interested in. Be sure you qualify for the class by grade level and meet any prerequisites.
4. Classes listed for 1 unit meet for both semesters. Classes listed as a .5 credit are semester long courses. For each semester only course you must request another semester only course as well.
5. If teacher approval is required you must request admission to that course. Make contact with the corresponding teacher to request to be in that class. The faculty will then communicate with the counseling department.
6. Any student who wishes to be a Teacher's Aide must have signed permission from the teacher and have a GPA of 3.0.
7. Any senior interested in the Internship course must apply for admission during the Spring of their Junior year to allow time to find potential placements.

8. Alternate courses should be listed in case of conflict on master schedule to initially requested courses.

9. Discuss your enrollment with your parents.

Schedule Change Policy

A specific period of time will be made available for students to request schedule changes.

- All schedules when released can be seen on Infinite Campus
- Fall schedules will be released over summer and schedule change request days are typically the first two weeks of school or students may email their counselor.
- Spring schedules will be released by the end of December and students may request changes throughout the first two weeks of spring classes by meeting with their counselor or by emailing a request.
- Schedule changes are final after the first two weeks of the semester unless the student has administrative approval.

Graduation Requirements

Below is a chart comparing Burrton High School and Kansas Board of Regents qualified admissions graduation requirements.

Area	BHS	KBOR
<i>Language Arts</i>	4 credits English I English II English III English IV <u>or</u> English Comp 1 & 2	4 credits 2 credits of foreign language
<i>Math</i>	3 credits Algebra Geometry 1 Additional Math Class	4 credits
<i>Physical Education / Health</i>	1 credit Freshman Physical Education / Health	No requirement
<i>Fine Arts</i>	1 credit Band Choir OR Graphic Design	No requirement
<i>Social Sciences</i>	3 credits World History U.S. History Government	3 credits
<i>Natural Science</i>	3 credits Earth & Space Biology 1 Additional Science Class	3 units Physics requirement
<i>Financial Literacy</i>	1 credit Business Essentials (0.5) Consumer & Personal Finance (0.5)	No requirement



Qualified Admissions

The six state universities in Kansas—Emporia State University, Fort Hays State University, Kansas State University, Pittsburg State University, The University of Kansas, and Wichita State University—use the standards below, set by the Kansas Board of Regents, to review applicants for undergraduate admission.

ACCREDITED HIGH SCHOOL

Freshman applicants, under the age of 21, who graduate from an accredited high school, will be guaranteed admission to six state universities by meeting the Qualified Admissions requirements designated by each university, as follows:

ESU, PSU, FHSU, & WSU:

- Cumulative High School GPA 2.25+ or ACT 21+ (SAT 1060)*

K-State:

- Cumulative High School GPA 3.25+ or ACT 21+ (SAT 1060)*

KU:






- Cumulative High School GPA 3.25+
OR Cumulative GPA 2.0+ and ACT 21+ (SAT 1060)*

ALL Institutions Require:

- Cumulative GPA 2.0+ for College Credits earned in High School

KANSAS SCHOLARS CURRICULUM IS RECOMMENDED BUT NOT REQUIRED: To best prepare for the rigor of college-level courses, the Kansas Scholars curriculum is recommended.

One unit is equivalent to one year, or two semesters:

				
English	Math	Social Science	Science	Foreign Language
4 units	4 units	3 units	3 units	2 units of the same language
	1 unit of each: Algebra I, Geometry, Algebra II 1 unit: Advanced Math See KS Scholars page For Math course list	1 unit U.S. History .5 unit U.S. Gov .5 unit World History 1 unit: Social Science course See KS Scholars Page for Social Science course list	1 unit of each: Biology, Chemistry, & Physics	

KANSAS SCHOLARS Program: More information about the Kansas Scholars Scholarship & Curriculum can be found [here](#) (pdf).

HOMESCHOOL & UNACCREDITED HIGH SCHOOL

Freshman applicants, under the age of 21, who are homeschooled or graduate from an unaccredited high school will be guaranteed admission to the six state universities by achieving an ACT score equivalent to those outlined above, per each university. If you enroll in college courses while in high school, it is also required that you achieve a 2.0 GPA or higher in those courses.

If you do not meet the qualified admission requirements, you are still encouraged to apply. Your application will be reviewed individually. Contact the university admissions office for more information.

This document provides a summary overview of admission requirements at state universities and is not a substitute for or to be used in lieu of the actual detailed admissions requirements, which can be found at: www.kansasregents.org/qualified_admissions_rules_regulations.

BHS Course Descriptions by Departments

Mathematics

Pre-Algebra

Pre-Algebra courses increase students' foundational mathematics skills and prepare them for Algebra I by covering a variety of topics, such as properties of rational numbers (i.e., number theory), ratio, proportion, estimation, exponents and radicals, the rectangular coordinate system, sets and logic, formulas, and solving first-degree equations and inequalities.

Algebra I

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

Geometry

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

Algebra II

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

Pre-Calculus

Pre-Calculus courses combine the study of Trigonometry, Elementary Functions, Analytic Geometry, and Mathematic Analysis topics as preparation for calculus. Topics typically include the study of complex numbers; polynomial, logarithmic, exponential, rational, right trigonometric, and circular functions, and their relations, inverses and graphs; trigonometric identities and equations; solutions

of right and oblique triangles; vectors; the polar coordinate system; conic sections; Boolean algebra and symbolic logic; mathematical induction; matrix algebra; sequences and series; and limits and continuity

English

English I

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

English II

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

English III

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

English IV

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

Comp I & II

Following the College Board’s suggested curriculum designed to parallel college-level English courses, AP English Language and Composition courses expose students to prose written in a variety of periods, disciplines, and rhetorical contexts. These courses emphasize the interaction of authorial purpose, intended audience, and the subject at hand, and through them, students learn to develop stylistic flexibility as they write compositions covering a variety of subjects that are intended for various purposes.

Social Studies

History Through Film

History Through Film is a year-long course during which we will watch historical films, each dedicated to an event, person, or era of World and American history. Along with watching the films, students will learn about the geographic and historic factors that combined to create the historical topic of the film. They will use maps, and primary and secondary source documents, to create a framework for understanding the area and time period. After watching the film, students will participate in activities that require research, writing, and presentation skills to evaluate the film in comparison to actual events.

World History

World History—Overview courses provide students with an overview of the history of human society from early civilization to the contemporary period, examining political, economic, social, religious, military, scientific, and cultural developments. World History—Overview courses may include geographical studies, but often these components are not as explicitly taught as geography.

U.S. History

U.S. History—Comprehensive courses provide students with an overview of the history of the United States, examining time periods from International Expansion to the 2020 or after. These courses typically include a historical overview of political, military, scientific, and social developments. Course content may include a history of the North American peoples before European settlement.

Government

U.S. Government—Comprehensive courses provide an overview of the structure and functions of the U.S. government and political institutions and examine

constitutional principles, the concepts of rights and responsibilities, the role of political parties and interest groups, and the importance of civic participation in the democratic process. These courses may examine the structure and function of state and local governments and may cover certain economic and legal topics.

Science

Intro to Health Care (0.5 credit)

Provides students with the basic knowledge of health/wellness professionals in private business and industry, community organizations, and health care settings. Includes instruction in personal health, community health and welfare, nutrition, epidemiology, disease prevention, fitness and exercise, and health behaviors. When to take: Sophomore-Senior

Biology (1 credit)

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

Anatomy & Physiology (1 credit)

Usually taken after a comprehensive initial study of biology, Anatomy and Physiology courses present the human body and biological systems in more detail. In order to understand the structure of the human body and its functions, students learn anatomical terminology, study cells and tissues, explore functional systems (skeletal, muscular, circulatory, respiratory, digestive, reproductive, nervous, and so on), and may dissect mammals. When to take: Junior/Senior

Chemistry (1 credit)

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

Physics (1 credit)

Physics courses involve the study of the forces and laws of nature affecting matter, such as equilibrium, motion, momentum, and the relationships between

matter and energy. The study of physics includes examination of sound, light, and magnetic and electric phenomena. When to take: Junior/Senior

Horticulture (1 credit)

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

Crop & Range Management (1 credit)

Crop & Range Management course imparts the application and skills needed to bring plant products to market. It may cover a wide variety of topics, including plant production, quality selection and preservation, equipment care and sanitation, government regulations, and marketing and consumer trends. This course may present an overview of product processing or may specialize in specific plant products and challenges related to range and pasture management. When to take: Sophomore-Senior

Floriculture & Greenhouse (1 credit)

Plant Identification and floral design are necessary knowledge skills along with the selection of greenhouse plants and management of greenhouses for production of plants and flowers in the industry. When to take: Sophomore-Senior

Medical Terminology (0.5 credit)

In Medical Terminology courses, students learn how to identify medical terms by analyzing their components. These courses emphasize defining medical prefixes, root words, suffixes, and abbreviations. The primary focus is on developing both oral and written skills in the language used to communicate within health care professions. When to take: Sophomore-Senior

CNA or EMT (0.5 credit)

This course provides an opportunity for students to participate in both the classroom and in two or more work experience rotations in each of the five pathways of the Health Science Education career cluster. During rotation opportunities, students will gain knowledge and skills required of all aspects of the healthcare profession. Students must complete at least five (5) rotations during the year that encompass occupations representing Diagnostic Services, Therapeutic Services, Health Informatics, Support Services and Biotechnology. Teaching and learning experiences to be included but not limited to are portfolio

development, documentation of daily shadowing experiences, appropriate communication skills, and proper application of HIPPA rules and regulations. Additional course content may include but is not limited to leadership skills and research of personal career interests in healthcare. Students enrolled in this course will be required to complete additional two-week rotations in specialized health science pathways leading to an industry recognized certification (EMT, CNA, Pharmacy Tech, Phlebotomy, etc.). When to take: Junior/Senior

Business

Business Essentials (0.5 credit)

This is a core course designed to give students an overview of the business, marketing and finance career cluster occupations. Students will develop an understanding of how academic skills in mathematics, economics, and written and oral communications are integral components of success in these occupations. Students will examine current events to determine their impact on business and industry and legal and ethical behavior, acquire knowledge of safe and secure environmental controls to enhance productivity, determine how resources should be managed to achieve company goals, and identify employability and personal skills needed to obtain a career and be successful in the workplace. As students learn about different types of business ownership, they will interpret industry laws and regulations to ensure compliance, identify principles of business management, and analyze business practices to determine ethics and social responsibilities. When to take: Freshmen/Sophomore

Business Economics (0.5 credit)

Business Economics courses integrate economic principles (such as free market economy, consumerism, and the role of American government within the economic system) with entrepreneurship/business concepts (such as marketing principles, business law, and risk).

Consumer & Personal Finance (0.5 credit)

Consumer and Personal Finance, explores the relationship of basic money management and consumer decision-making across the lifespan. It includes an in-depth look at risk management, use of credit, consumer rights and responsibilities, setting goals and impact of the family on personal financial decision making. How to make wise choices to develop a healthy financial self will be a major component of this course as well as an introduction to the occupations related to the field. When to take: Junior/Senior

Business Law (0.5 credit)

Business Law courses present a history and philosophy of law and the legal system in the United States, with a particular emphasis on those topics affecting students as future business leaders and employees. Such topics may include contracts, commercial paper and debt instruments, property rights, employer/employee relationships, and constitutional rights and responsibilities.

Investing (0.5 credit)

Investing courses emphasize the formulation of business and individual investment decisions by comparing and contrasting the investment qualities of cash, stock, bonds, and mutual funds. Students typically review annual reports, predict growth rates, and analyze trends. Stock market simulations are often incorporated into Investing courses. When to take: 2nd semester after Consumer and Personal Finance

Accounting (1 credit)

Accounting courses introduce and expand upon the fundamental accounting principles and procedures used in businesses. Course content typically includes the full accounting cycle, payroll, taxes, debts, depreciation, ledger and journal techniques, and periodic adjustments. Students may learn how to apply standard auditing principles and to prepare budgets and final reports. Calculators, electronic spreadsheets, or other automated tools are usually used. Advanced topics may include elementary principles of partnership and corporate accounting and the managerial uses of control systems and the accounting process. When to take: Freshmen-Senior

Banking & Finance (0.5 credit)

Banking and Finance courses provide students with an overview of the American monetary and banking system as well as types of financial institutions and the services and products that they offer. Course content may include government regulations; checking, savings, and money market accounts; loans; investments; and negotiable instruments. When to take: Sophomore-Senior

Business Communications (0.5 credit)

Business Communications courses help students to develop an understanding and appreciation for effective communication in business situations and environments. Emphasis is placed on all phases of communication: speaking, listening, thinking, responding, reading, writing, communicating nonverbally, and utilizing technology for communication. Business communication functions, processes, and applications in the context of business may be practiced through

problem-based projects and real world application. When to take:
Sophomore-Senior

Advanced Spreadsheet (0.5 credit)

Advanced Spreadsheet Applications allows students to develop knowledge and skills regarding the basic concepts of spreadsheets. Students will learn how to format cells, ranges, and worksheets, work with data, use basic and advanced formulas and functions, create and modify charts, and insert pictures and shapes to a worksheet. When to take: Sophomore-Senior

College Accounting (1 credit)

The course includes financial accounting, managerial accounting and financial statement analysis topics. Compared to the traditional, stand-alone financial accounting and managerial accounting courses, this course encompasses more topics and learning outcomes than the traditional financial accounting course, and at least a quarter of the topics and learning outcomes in a traditional managerial course. When to take: After completing Accounting I

Finance Workplace Experience (0.5 credit)

Finance—Workplace Experience courses provide students with work experience in fields related to finance. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace. Internship. When to take: Junior/Senior

Applied Business Development (0.5 credit)

Applied Business Development students will practice skills of planning, organizing, directing and controlling functions of operating a business while assuming the responsibilities and risk involved. Students will develop skills in enterprise development, market analysis and financial preparation. Internship. When to take: Junior/Senior

Family & Consumer Studies

Intro to FACS (1 credit)

Introduction to Family and Consumer Sciences offers a look into the many occupations linked to providing for the basic needs of children, individuals and families. Occupations may include: nutrition educator, child care provider, social worker, foster parent, credit counselor, geriatric care provider, senior citizen care director, food service provider, restaurant manager, culinary artists, interior designer, fashion production and design, event planner and teacher. When to take: Freshmen-Senior

Teaching as a Career (0.5 Credit)

Teaching Profession courses introduce students to the principles underlying teaching and learning, the responsibilities and duties of teachers, and the techniques of imparting knowledge and information. These courses typically expose students to and train them in classroom management, student behavior, leadership and human relations skills, assessment of student progress, teaching strategies, and various career opportunities in the field of education. When to take: Sophomore-Senior

Teaching Observation (0.5 Credit)

Teaching observation courses build upon the understanding of the requirements of the teaching profession through student observations and study of best practices in multiple classroom settings. Observation analysis will be focused around the elements of effective instruction – planning and preparation, the learning environment, instructional strategies, and teacher/trainer professional responsibilities. This class will take the place of student aid. When to take: Sophomore-Senior

Teaching Internship (1 credit)

Educational Methodology courses prepare students to teach and guide others. These courses typically provide opportunities for students to develop their own teaching objectives, to design lesson plans, and to experience teaching in a controlled environment. Students examine and practice teaching strategies, learning styles, time management and planning strategies, presentation and questioning skills, classroom management, and evaluation techniques. When to take: Junior/Senior

Human Growth & Development (0.5 credit)

Human Growth and Development courses focus on the application of human development theories and stages of growth to the relationships among individuals at various stages of life, as well as provide an understanding of how people change across their lifespans. Course content may include the application of human development theories in family systems and community settings.

Interactions of grandparents and their grandchildren, adult children and their aging parents, as well the similarities between caring for the elderly and caring for young children may also be explored. When to take: Freshmen-Senior

Nutrition & Wellness (0.5 credit)

Nutrition and Wellness explores the relationship of basic nutrition and wellness across the lifespan. It includes an in-depth look at special dietary needs, regulations, technology and the global impact on nutrition and food choices. How to make wise nutritional and wellness choices to develop a healthy self will be a major component of this course as well as an introduction to the occupations related to the field. When to take: Freshmen-Senior

Family Studies (0.5 credit)

The Family Studies course explores the roles and responsibilities of parents such as how society, media, technology and diversity impact their ability to balance work and family. It also includes the development of children and parents as their earliest teacher. Parenting styles and family stages are explored as is the changing demographics which will change the face of the US family. Parenting and behavior guidance skills are strengthened through a study of positive family relationships, child abuse and neglect, safety, and health practices. Occupations related to meeting the needs of families will be analyzed. This course will promote the creation of healthy and sustainable families be they their own or those they work with. When to take: Freshmen-Senior

Culinary Essentials (0.5 credit)

The Culinary Essentials course provides students with knowledge and skills related to commercial and institutional food service establishments. Course topics include career pathways, employability skills, sanitation and safety procedures, measurements, tools and equipment, food preparation and production. When to take: Freshmen-Senior

Career Connections (0.5 credit)

Career Connections provides human services/family and consumer sciences related work-based learning experiences (paid or unpaid) outside the traditional classroom. Learning goals are set by the student, teacher and employer/adult mentor to create field experiences and/or discussions related to human services/family and consumer sciences occupational technical skills. **This course has a prerequisite of a 1.0 credit within Human Services Cluster Pathways courses. Internship. When to take: Junior/Senior

Community Connections (0.5 credit)

Community Connections provides community based/school based learning experiences typically within the family and consumer sciences classroom. Learning goals are set by the student, teacher and community partners to create experiences and/or discussions to enhance the development of the workplace skills (e.g. leadership, empathy, communication, problem solving, cooperation, critical thinking, and resource management) needed to be successful in service related careers. **This course has a pre-requisite of a 1.0 credit within Human Services Cluster Pathways courses. Internship. When to take: Junior/Senior

Career & Life Planning (0.5 credit)

This course will introduce students to the skills and strategies needed to be focused, productive individuals. Emphasis is placed on goal-setting, decision making, time and personal management. Development of workplace skills, knowledge and attitudes needed to be successful in various career, community and family settings will be incorporated throughout this course. When to take: Freshmen-Senior

Leadership Service in Action (0.5 credit)

Leadership Service in Action empowers individuals to assume advocacy roles which support families, communities and consumers by researching social issues, developing and implementing an action plan, and applying decision making through civic engagement and service learning. When to take: Freshmen-Senior

Construction

Intro to Industrial Technology (0.5 credit)

An introductory level course designed to instruct students in the basic skills necessary to all occupations in the Construction, Manufacturing and Transportation career clusters. When to take: Freshmen-Senior

CAD / Drafting (1 credit)

Drafting—General courses, usually offered as a sequence of courses, introduce students to the technical craft of drawing illustrations to represent and/or analyze design specifications and then refine the skills necessary for this craft. Drafting—General courses use exercises from a variety of applications to provide students with the knowledge and experience to develop the ability to perform freehand sketching, lettering, geometric construction, and multiview projections and to produce various types of drawings (working, detail, assembly, schematic, perspective, and so on). Computer-aided drafting (CAD) systems (if available)

are typically introduced and used to fulfill course objectives. When to take:
Freshmen-Senior

Carpentry I & II (1 credit)

Carpentry courses provide information related to the building of wooden structures, enabling students to gain an understanding of wood grades and construction methods and to learn skills such as laying sills and joists; erecting sills and rafters; applying sheathing, siding, and shingles; setting door jambs; and hanging doors. Carpentry courses may teach skills for rough construction, finish work, or both. Students learn to read blueprints, draft, use tools and machines properly and safely, erect buildings from construction lumber, perform finish work inside of buildings, and do limited cabinet work. Carpentry courses may also include career exploration, good work habits, and employability skills. When to take: Freshmen-Senior

Woodworking Principles (1 credit)

A comprehensive course designed to instruct students in the basic knowledge and skills required for cabinetmaking and furniture design. When to take:
Freshmen-Senior

Furniture & Cabinetry (1 credit)

An advanced level application course designed to provide students with experience in constructing cases, cabinets, counters, furniture and interior woodwork. When to take: Sophomore-Senior

Electrical & Security Systems (0.5 credit)

Online. Course design to teach basic skills required for installation of electrical and security systems. When to take: Sophomore-Senior

HVAC & Plumbing Systems (0.5 credit)

Online. Course designed to teach basic skills required for installation of HVAC and plumbing systems. When to take: Sophomore-Senior

Workplace Experience in Manufacturing (0.5 credit)

Course Description: Advanced research and application level course covering specific topics in manufacturing. Should include opportunities for Work-Based Learning (WBL) such as in-house training, job shadowing, and/or internships. (Prerequisite: Must take at least 1.0 credit of Technical level course and Application level course combined.) (SCED: Workplace Experience course provides students with work experience in the fields involving repair, supported by classroom attendance and discussion. Goals are typically set cooperatively by

the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.) Previously WorkBased Maintenance Experience. Internship. When to take: Junior/Senior

Media Technology

Digital Media Design & Production (1 credit)

Digital Media Design and Production courses teach students the fundamentals of graphic design and production and provide students with the opportunity to apply these principles to printed media, digital presentation media, and interactive media. When to take: Junior/Senior

Intro to Drawing & Design (0.5 credit)

Introduction to Drawing and Design emphasized the development of fundamental drawing skills for students learning graphic design. Focus will be on the application of art theory, processes and techniques that increase the power of observation. Instruction includes the elements and principles of design as applied in composition through hard copy and/or electronic software. When to take: Freshmen-Senior

Principles of Illustration (0.5 credit)

A principle of Illustration explores a variety of media, tools and supports as a means to communicate ideas. Topics include an understanding of illustration as it applicable to careers in graphic design, animation, fashion/textile design, industrial design, web design, architecture, interior design and/or fine arts. Techniques in traditional and digital illustration applications will be explored as directly linked to ever-changing social trends. When to take: Freshmen-Senior

Photo Imaging (0.5 credit)

Photo Imaging courses provide students with the opportunity to effectively communicate ideas and information via digital, film, still and video photography. Topics covered typically include composition, layout, lighting and supplies. More advanced courses may include instruction in specialized camera and equipment maintenance, application to commercial and industrial need and photography business operations. When to take: Freshmen-Senior

Graphic Design (1 credit)

Graphic Design courses emphasize design elements and principles in the purposeful arrangement of images and text to communicate a message. They focus on creating art products such as advertisements, product designs, and identity symbols. Graphic Design courses may investigate the computer's influence on and role in creating contemporary designs and provide a cultural and historical study of master design works of different periods and styles. When to take: Freshmen-Senior

Media Tech & Workplace Experience (1 credit)

Media Technology—Workplace Experience courses provide students with work experience in fields related to media technology. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace. Internship. When to take: Junior/Senior

Business / Shop Combo Class

Production Methods (1 credit) & Entrepreneurship (0.5 credit) / Business Management (0.5 credit)

This is a dual credit period in which students will earn two course credits. This will be a team taught course with Mr. Bruton and Mr. Goetz. This is a production class where students will be participating in all aspects of the manufacturing process. A portion of the class will be taught in the classroom where students will learn the business aspects. The other portion of the class students will be in the lab actively performing the manufacturing side of the business. Products created in class will be sold and profits will return to the shop/business class.

Prerequisite: Intro to Industrial Technology and Business Essentials.

NHS Course Descriptions by Departments

Burrton High School students are given the opportunity to apply for courses offered by Newton High School. Below are the CTE courses available for application.

Agriculture

Agriscience

This course covers fundamental skills of welding Ag-mechanics, livestock, crop production, agri-science occupations and careers. Introductions to CDE's, SEI's and leadership in FFA is an integral part of the course. The onsite outdoor lab enhances classroom learning. Students will become knowledgeable of and have the opportunity to participate in local, state and National FFA activities. Students will be required to purchase welding gloves, pliers and safety glasses. FFA participation is strongly encouraged

Intro to Ag Mechanics

Agriculture Mechanics/Equipment/Structures courses provide students with the skills and knowledge that are specifically applicable to the tools and equipment used in the agricultural industry. While learning to apply basic industrial knowledge and skills (engine mechanics, power systems, welding, and carpentry, among others), students may explore a broad range of topics, including the operation, mechanics, and care of farm tools and machines; the construction and repair of structures integral to farm operations; a study of electricity and power principles; and safety procedures.

Animal Science

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

Horticulture I

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

Pre-Vocational Welding

Formerly known as Agriculture Welding, Agricultural Metal Fabrication Technology courses provide students with the skills and knowledge that are

specifically applicable to the tools and equipment used in the agricultural industry. In learning to apply basic industrial knowledge and skills (engines, power, welding, and carpentry, among others), students may explore a broad range of topics, including the operation, mechanics, and care of farm tools and machines; the construction and repair of structures integral to farm operations; an introduction or review of electricity and power; and safety procedures.

Advanced Modern Ag Mechanics

Agriculture Mechanics/Equipment/Structures courses provide students with the skills and knowledge that are specifically applicable to the tools and equipment used in the agricultural industry. While learning to apply basic industrial knowledge and skills (engine mechanics, power systems, welding, and carpentry, among others), students may explore a broad range of topics, including the operation, mechanics, and care of farm tools and machines; the construction and repair of structures integral to farm operations; a study of electricity and power principles; and safety procedures.

Biotechnology in Agriculture

Focuses on the application of molecular biology, biochemistry, and biophysics to the study of biomolecular structures, functions, and processes specific to plants and plant substances.

Small Engine Repair

Courses provide students with the opportunity to learn how to service & recondition small engines, typically emphasizing two and four-cycle engines. Courses provide student with opportunities to troubleshoot and repair speed controls, lubrication, ignition, fuel, power transfer, cooling, exhaust, and starting systems; use hand, power, and overhaul tools; and read and interpret service manuals and parts' catalogs. Applications may include lawn mowers, tractors, tillers, power tools

Plant & Animal Science

Veterinary Science courses impart information about the causes, diagnosis, and treatment of diseases and injuries of animals, typically emphasizing domestic and farm animals. Course topics focus on anatomy and physiology, nutrition, behavior, and reproduction, but may also include other areas of study as appropriate.

Animal Health / Vet Tech

This course takes an in depth look into animal health. Students will be exposed to a number of careers in animal health, including veterinarians, vet technicians,

microbiologists, pathologists, genetics, pharmacists, food scientists and others. Student will be exposed to many different cells and tissues from a variety of species. The course will cover anatomy and physiology, epidemiology. Laboratory activities will include live animal health checks and vaccination, artificial insemination, stitch work.

Horse Management

Equine Science courses focus on the care and management of horses. Animal nutrition, health, behavior, reproduction and breeding, anatomy and physiology, facilities, handling and training, and grooming are typical areas of study

Horticulture II

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

Ag Power

Ag power mechanics will give the students hands on opportunities to repair and maintain internal combustion engines, electrical, and hydraulic systems. Scientific, mathematical, economics, and technical principles are reinforcing in this course, as are communication and critical thinking skills. Work-based learning strategies appropriate for this course are field trips and activities in the school lab facility.

Ag Equipment Construction

Agriculture equipment construction is designed for juniors and seniors who want to study the design and operation of Ag equipment. Students will apply mechanical skills to the design and construction of agriculture equipment. Students will learn blueprint reading and technical reading for the purpose of construction and assembling agriculture equipment. FFA membership is required. Projects will be entered into the appropriate national competitive event for evaluation.

Ag Business

Agribusiness Management courses provide students with the information and skills necessary for success in agribusiness and in operating entrepreneurial ventures in the agricultural industry. These courses may cover topics such as economic principles, budgeting, risk management, finance, business law,

marketing and promotion strategies, insurance, and resource management. Other possible topics include developing a business plan, employee/employer relations, problem-solving and decision making, commodities, and building leadership skills. These courses may also incorporate a survey of the careers within the agricultural industry.

Automotive

Auto Technology I

Primarily intended as a personal automobile mechanics course, but also useful for students exploring future careers in automotive technologies, Introduction to Automobiles courses expose students to the various mechanical systems in automobiles and provide basic experience in maintenance tasks. The course may also cover career opportunities in the automotive and/or transportation fields.

Auto Technology II

Automotive Service courses emphasize preventative auto maintenance and automobile troubleshooting. Course content typically includes tune-up, oil change, and lubrication skills; tire replacement, alignment, and balancing; and basic knowledge of brake, cooling, electrical, emission, fuel, ignition, steering, suspension, and transmission systems. These courses may also include public relations, sales techniques, and service station management.

Auto III Drive Train

This is a comprehensive technical course designed to teach students the hands-on skills involved in maintenance, diagnosis, and repair of the drivetrain components including; transmissions, differentials, axles, and other components. This class will concentrate on lab activities and projects that will increase student understanding. This class also places students in enrollment at HCC – no cost

Auto III Mobile HVAC

This is a comprehensive technical level course designed to provide students with the basic and advanced theory of operation, service, and repair of the heating, air conditioning, and vehicle cooling system.

Engineering

Intro to Engineering Design

Engineering Design courses offer students experience in solving problems by applying a design development process. Often using solid modeling computer design software, students develop, analyze, and test product solutions models as well as communicate the features of those models.

Principles of Engineering

Principles of Engineering courses provide students with an understanding of the engineering/technology field. Students typically explore how engineers use various technology systems and manufacturing processes to solve problems; they may also gain an appreciation of the social and political consequences of technological change.

Civil Engineering & Architecture

Civil Engineering and Architecture courses provide students with an overview of the fields of Civil Engineering and Architecture while emphasizing the interrelationship of both fields. Students typically use software to address real world problems and to communicate the solutions that they develop. Course topics typically include the roles of civil engineers and architects, project-planning, site-planning, building design, project documentation, and presentation.

Engineering Design & Development

Engineering Design and Development courses provide students with the opportunity to apply engineering research principles as they design and construct a solution to an engineering problem. Students typically develop and test solutions using computer simulations or models but eventually create a working prototype as part of the design solution.

Health Science

CNA

This course provides an opportunity for students to participate in both the classroom and in two or more work experience rotations in each of the five pathways of the Health Science Education career cluster. During rotation opportunities, students will gain knowledge and skills required of all aspects of the healthcare profession. Students must complete at least five (5) rotations during the year that encompass occupations representing Diagnostic Services, Therapeutic Services, Health Informatics, Support Services and Biotechnology. Teaching and learning experiences to be included but not limited to are portfolio development, documentation of daily shadowing experiences, appropriate communication skills, and proper application of HIPPA rules and regulations.

Additional course content may include but is not limited to leadership skills and research of personal career interests in healthcare. Students enrolled in this course will be required to complete additional two-week rotations in specialized health science pathways leading to an industry recognized certification (EMT, CNA, Pharmacy Tech, Phlebotomy, etc.).

Fire Science I & II

The first of two courses designed to provide students with the knowledge and skills to obtain a Fire Fighter I & II national certification.

EMT

This course provides an opportunity for students to participate in both the classroom and in two or more work experience rotations in each of the five pathways of the Health Science Education career cluster. During rotation opportunities, students will gain knowledge and skills required of all aspects of the healthcare profession. Students must complete at least five (5) rotations during the year that encompass occupations representing Diagnostic Services, Therapeutic Services, Health Informatics, Support Services and Biotechnology. Teaching and learning experiences to be included but not limited to are portfolio development, documentation of daily shadowing experiences, appropriate communication skills, and proper application of HIPPA rules and regulations. Additional course content may include but is not limited to leadership skills and research of personal career interests in healthcare. Students enrolled in this course will be required to complete additional two-week rotations in specialized health science pathways leading to an industry recognized certification (EMT, CNA, Pharmacy Tech, Phlebotomy, etc.).

IT: Networking

IT Essentials

IT Essentials: PC Hardware and Software courses provide students with in-depth exposure to computer hardware and operating systems. Course topics include the functionality of hardware and software components as well as suggested best practices in maintenance and safety issues. Students learn to assemble and configure a computer, install operating systems and software, and troubleshoot hardware and software problems. In addition, these courses introduce students to networking and often prepare them for industry certification.

Networking Systems

Networking Systems courses are designed to provide students with the opportunity to understand and work with hubs, switches, and routers. Students

develop an understanding of LAN (local area network), WAN (wide area network), wireless connectivity, and Internet-based communications with a strong emphasis on network function, design, and installation practices. Students acquire skills in the design, installation, maintenance, and management of network systems that may help them obtain network certification.

Router Basics

Router Basics courses teach students about router components, start-up, and configuration using CISCO routers, switches, and the IOS (Internetwork Operation System). These courses also cover such topics as TCP/IP protocol, IP addressing, subnet masks, and network trouble-shooting

Manufacturing

Principles of Precision Machining & CNC

This course examines how parts are manufactured using conventional machining equipment such as lathes and mills. This class is a combination of hands-on and theory in producing products on precision manual equipment and then progress to the more advanced CNC Machine tools in the production lab. This class is first in the progression toward college credit and the completion of the precision machining program.

Precision Machining & CNC Fundamentals I

Areas of study will include safety, bench work, measuring and layout, lathe work, milling, drilling, grinding materials, blueprint reading, introduction to CNC and modern manufacturing methods. Selecting the proper materials and tools, planning the project sequence according to the blueprints or written specifications, forming the metal product while holding accuracies to within thousandths of an inch are skills obtained in this class. The understanding of dimensions, units of measure and measuring instruments is necessary for proficiency in machine technology.

Precision Machining & CNC Fundamentals II

Emphasis will be placed on blueprint reading and related math skills. Instruction will be given on CNC (computer controlled machines) and SPC (statistical process control), a quality control system used in industry. This program will prepare students for direct entry into manufacturing or can also serve as recommendation for students wishing to pursue an engineering degree or other advanced technical training.

Welding Technology I

Welding courses enable students to gain knowledge of the properties, uses, and applications of various metals, skills in various processes used to join and cut metals (such as oxyacetylene, shielded metal, metal inert gas, and tungsten arc processes), and experience in identifying, selecting, and rating appropriate techniques. Welding courses often include instruction in interpreting blueprints or other types of specifications.

Welding Technology II

Welding courses enable students to gain knowledge of the properties, uses, and applications of various metals, skills in various processes used to join and cut metals (such as oxyacetylene, shielded metal, metal inert gas, and tungsten arc processes), and experience in identifying, selecting, and rating appropriate techniques. Welding courses often include instruction in interpreting blueprints or other types of specifications.

Career and Technical Education (CTE) Pathways

Burrton High School has 10 state approved CTE pathways. These classes offer students the opportunity to take targeted classes towards a possible career interest and to develop skills that could possibly lead to certain industry certifications. Courses are broken down into Introductory, Technical and Application level courses.

State Approved Pathways

Graphic Design Pathway

Construction & Design

Plant Systems

Health Science

Business Management & Entrepreneurship

Manufacturing

Teaching/Training

Digital Media Pathway

Business Finance

Family, Community & Consumer Service