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The Cumberland County Course Catalog reflects all courses offered in Cumberland County. Course offerings can vary from school to school based on school needs.

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CUMBERLAND COUNTY SCHOOLS GRADUATION REQUIREMENTS

| | |
|--|------------------------|
| ENGLISH | 4 credits |
| 1 credit of English each year of high school | |
| MATH | 4 credits |
| Including Algebra I, II, Geometry and a fourth higher level math course (Students must be enrolled in a mathematics course each school year.) | |
| SCIENCE | 3 credits |
| Including Biology, Chemistry or Physics, and a third lab course. | |
| SOCIAL STUDIES | 3 credits |
| Including U.S. History and Geography, World History and Geography, U.S. Government and Civics, and Economics. | |
| PHYSICAL EDUCATION/WELLNESS | 1.5 credits |
| PERSONAL FINANCE | .5 credit |
| FORGEIN LANGUAGE | 2 credits |
| 2 years of the same language. May be waived by the local school district for students, under certain circumstnances, to expand and enhance the elective focus | |
| FINE ARTS | 1 credit |
| May be waived by the local school district for students, under certain circumstances, to expand and enhance the elective focus | |
| ELECTIVE FOCUS | 3 credits |
| 3 credits consisting of Career and Technical Education (CTE), Math and Science, Fine Arts, Humanities, or Advanced Placement (AP). | |

Students must **earn 5 additional credits** to the credits listed above.
Students must have a **total of 27 credits to graduate** from Cumberland Country.*

*Requirements for students graduating from The Phoenix School differ from the other County High Schools

ENGLISH

English I- Students study the fundamental skills of grammar, writing, and literature in this course. Emphasis is placed on the following study areas: vocabulary development, spelling, grammar usage, sentence structure, basic writing skills, general literacy, and use of reference tools through writing and computer technology. The curriculum is designed to aid students in successful completion of the state mandated English I End of Course examination.

Honors English I- English I honors offers a combination of advanced grammar and composition skills along with a survey study of literature including selections from American, English, and world literature. The curriculum is designed to aid students in successful completion of the state mandated English I End of Course examination. Honors standards and expectations will apply.

English II- English II begins with a short review of basic elements of grammar and introduces those advanced elements of grammar not completed in English I. Composition skills in usage, punctuation, and sentence structure are reinforced through writing assignments and comprehensive grammar exercises designed to aid students in successful completion of the course as well as successful completion of the state mandated English II End of Course examination.

Honors English II- Students will perform at a rigorous academic level in order to master the reading, analysis, and synthesis of complex texts with understanding and enhancement. The curriculum is designed to aid students in successful completion of the course as well as the state mandated English II End of Course examination. Honors standards and expectations will apply.

English III- student reinforces his/her prior knowledge of writing mechanics through a variety of writing styles, with an emphasis placed upon argumentative, analytical, and narrative writing. Emphasis is also placed upon strengthening vocabulary skills, including but not limited to academic vocabulary. Writing focus includes constructed response, reason, example, description, incident, and point of view.

Honors English III- Students will perform at a rigorous academic level in order to master the reading, analysis, and synthesis of complex texts with understanding and enhancement. Emphasis is also placed upon strengthening academic vocabulary skills. Writing focus includes constructed response, reason, example, description, incident, and point of view. Honors standards and expectations will apply.

AP English Language & Composition- AP English Language and Composition is a rigorous course that provides students with a challenging learning experience equivalent to an introductory college level rhetoric and composition course. Students enrolling are expected to have mastered skills in reading and writing standard English and should assume considerable responsibility for the amount of reading and writing they do. The emphasis of the course is the analytical and argumentative writing that forms the basis of academic and professional communication, as well as the personal and reflective writing that fosters the development of writing facility in any context. Students will become more effective and confident writers in their college courses across the curriculum and in their professional and personal lives. Students will be prepared to take the AP exam and those who score a 3 or above will earn college credit. Fees will apply.

AP English Literature & Composition- College English Composition is a rigorous, year-long course that provides students with a challenging learning experience. Students will learn how to understand and evaluate works of fiction, poetry, and drama from various periods and cultures. Students will read literary works and write essays to explain and support an analysis of them. Students will be prepared to take the AP exam and those who score a 3 or above will earn college credit. Fees will apply.

English IV- This course includes the study of writing skills and grammar usage. Emphasis is placed on vocabulary. World and English literature selections are covered. This credit satisfies the requirement for a student's fourth English course.

Honors English IV- This course includes a brief review of grammar usage with intensive study and practice of writing skills, particularly critical or evaluative writing. It also includes a survey of English and World literature (all literary genres). Honors standards and expectations will apply.

Dual Enrollment English Composition I- College English Composition is a rigorous course that provides students with a challenging learning experience. The emphasis of the course is the analytical and argumentative writing that forms the basis of academic and professional communication, as well as the personal and reflective writing that fosters the development of writing facility in any context. Students must meet current college guidelines on the ACT. Students will earn college credit through dual enrollment with the successful completion of this class. Fees will apply.

Dual Enrollment English Composition II- College English Composition is a rigorous course that provides students with a challenging learning experience. The emphasis of the course is the analytical and argumentative writing that forms the basis of academic and professional communication, as well as the personal and reflective writing that fosters the development of writing facility in any context. Students must meet current college guidelines on the ACT. Students will earn college credit through dual enrollment with the successful completion of this class. Fees will apply.

Creative Writing- Students will have the opportunity to experience expository writing in the classroom but have little time to develop imaginative writing. Creative Writing allows them to promote self-expression, to explore various writing styles, and to strive for variety in diction, sentence structure, and format.

Journalism- The journalism program is for students to improve both oral and written communication skills. Journalism offers students the opportunity to improve speech skills, research skills, grammar usage, and interview skills as well as production skills for both print and broadcast.

English as a Second Language- Instruction starts where the student needs to begin, perhaps with basic survival skills. Instruction in standard English continues in the areas of speaking, reading, writing, and understanding spoken English. American cultural practices, customs and more are discussed. Non-English speakers may get 2 credits in English.

MATHEMATICS

Algebra 1 Part 1- Algebra 1 Part 1 emphasizes linear and quadratic expressions, equations, and functions. This course also introduces students to polynomial and exponential functions with domains in the integers. Students explore the structures of and interpret functions and other mathematical models. Students build upon previous knowledge of equations and inequalities to reason, solve, and represent equations and inequalities numerically and graphically.

Algebra 1 Part 2- Algebra 1 Part 2 emphasizes linear and quadratic expressions, equations, and functions. This course also introduces students to polynomial and exponential functions with domains in the integers. Students explore the structures of and interpret functions and other mathematical models. Students build upon previous knowledge of equations and inequalities to reason, solve, and represent equations and inequalities numerically and graphically. The curriculum is designed to aid students in successful completion of the state mandated Algebra 1 Part 2 End of Course examination.

Honors Algebra I- Honors Algebra I emphasizes linear and quadratic expressions, equations, and functions. This course also introduces students to polynomial and exponential functions with domains in the integers. Students explore the structures of and interpret functions and other mathematical models. Students build upon previous knowledge of equations and inequalities to reason, solve, and represent equations and inequalities numerically and graphically. The curriculum is designed to aid students in successful completion of the state mandated Algebra I End of Course examination. Honors standards and expectations will apply.

Algebra 2 Part 1- This course includes solving systems of equations and inequalities, matrices, radical and rational expressions, graphing conics, polynomial functions, probability, exponential and logarithmic functions, sequences and trigonometric functions.

Algebra 2 Part 2- Algebra 2 Part 2 is a continuation of Algebra 2 Part 1. This course includes solving systems of equations and inequalities, matrices, radical and rational expressions, graphing conics, polynomial functions, probability, exponential and logarithmic functions, sequences and trigonometric functions. The curriculum is designed to aid students in successful completion of the state mandated Algebra 2 End of Course examination.

Honors Algebra 2 Part 1- This course includes solving systems of equations and inequalities, matrices, radical and rational expressions, graphing conics, polynomial functions, probability, exponential and logarithmic functions, sequences and trigonometric functions. Honors standards and expectations will apply.

Honors Algebra 2 Part 2- Honors Algebra 2 Part 2 is a continuation of Honors Algebra 2 Part 1 as well as additional topics such as circular functions, complex numbers, and vectors. The curriculum is designed to aid students in successful completion of the state mandated Algebra 2 End of Course examination. Honors standards and expectations will apply.

Geometry- Geometry emphasizes similarity, right triangle trigonometry, congruence, and modeling geometry concepts in real life situations. Students build upon previous knowledge of similarity, congruence, and triangles to prove theorems and reason mathematically. This course also introduces students to geometric constructions and circles. Students show a progression of mastery and understanding of the use and application of surface area and volume. The curriculum is designed to aid students in successful completion of the state mandated Geometry End of Course examination.

Honors Geometry- Geometry emphasizes similarity, right triangle trigonometry, congruence, and modeling geometry concepts in real life situations. Students build upon previous knowledge of similarity, congruence, and triangles to prove theorems and reason mathematically. This course also introduces students to geometric constructions and circles. Students show a progression of mastery and understanding of the use and application of surface area and volume. The curriculum is designed to aid students in successful completion of the state mandated Geometry End of Course examination. Honors standards and expectations will apply.

Bridge Math- Bridge Math is a course intended to build upon concepts taught in previous courses to allow students to gain a deeper knowledge of the real and complex number systems as well as the structure, use, and application of equations, expressions, and functions. Functions emphasized include linear, quadratic and polynomial. Students continue mastery of geometric concepts such as similarity, congruence, right triangles, and circles. Students use categorical and quantitative data to model real life situations and rules of probability to compute probabilities of compound events.

Bridge/SAILS Math- Students who take the ACT their junior year and score less than a 19 in Math can take the SAILS Math course their senior year. In SAILS, these students can complete the college Learning Support Math program, preparing them for a college-level math course, which will give them a jump-start on their college career.

Dual Enrollment Calculus I- This course includes the study of limits, derivatives, applications of derivatives, integrals, applications of definite integrals, logarithmic, exponential, hyperbolic, and trigonometric functions, improper integrals, infinite series and analytic geometry. College credit will be earned with the successful completion of this course. Fees will apply.

Dual Enrollment College Algebra- College Algebra is a course designed for those students who need additional preparation in algebra before taking higher level mathematics (i.e. pre-calculus) or to meet a high school or college math requirement. College credit will be earned with the successful completion of this course. Fees will apply.

Dual Enrollment Pre-Calculus- This course emphasizes a multi representational approach to calculus with concepts, results, and problems being expressed geometrically, numerically, analytically, and verbally. College credit will be earned with the successful completion of this course. Fees will apply.

Dual Enrollment Statistics- This course is an introductory non-calculus based college statistics course. An introductory statistics course, similar to the Statistics course, is typically required for majors such as social sciences, health sciences, and business. Science, engineering, and math majors usually take an upper-level calculus- based course in statistics. College credit will be earned with the successful completion of this course. Fees will apply.

Dual Enrollment Calculus II- This is a continuation of Calculus I. College credit will be earned with the successful completion of this course. Fees will apply.

SCIENCE

Agriscience- Agriscience is an introductory laboratory science course that prepares students for biology, subsequent science and agriculture courses, and postsecondary study. This course helps students understand the important role that agricultural science and technology plays in the twenty-first century. In addition, it serves as the first course for all programs of study in the Agriculture, Food, & Natural Resources cluster. Upon completion of this course, proficient students will be prepared for success in more advanced agriculture and science coursework. This course counts as a lab science credit toward graduation requirements

Honors Agriscience- Agriscience is an introductory laboratory science course that prepares students for biology, subsequent science and agriculture courses, and postsecondary study. This course helps students understand the important role that agricultural science and technology plays in the twenty-first century. In addition, it serves as the first course for all programs of study in the Agriculture, Food, & Natural Resources cluster. Upon completion of this course, proficient students will be prepared for success in more advanced agriculture and science coursework. This course counts as a lab science credit toward graduation requirements. Honors standards and expectations will apply.

Physical Science- Skills, such as pattern recognition, cause and effect, experimental design, scale and proportion, systems, structure and function, and stability, will be embedded throughout this course. The process of observation, hypothesis testing, and application of ideas will be continually incorporated within the content of this course.

Honors Physical Science- Skills, such as pattern recognition, cause and effect, experimental design, scale and proportion, systems, structure and function, and stability, will be embedded throughout this course. The process of observation, hypothesis testing, and application of ideas will be continually incorporated within the content of this course. Honors standards and expectations will apply.

Biology I- The academic standards for High School Biology I establish the content knowledge and skills for Tennessee students in order to prepare them for the rigorous levels of higher education and future job markets. The course provides students with a wealth of experiences for both science practices and content knowledge needed in an ever changing world. The academic standards for Biology I are research-based, supported by the National Research Council's Framework for K-12 Science Education, and establish the core ideas and practices of science and engineering that will prepare students to use scientific thinking to examine and evaluate knowledge encountered throughout their lives. End of course testing is mandated.

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Honors Biology II- Biology II provides students with the opportunity to focus on a particular aspect of life science in more detail while continuing to provide knowledge that is rooted in the same crosscutting concepts and practices utilized throughout all of the sciences. The academic standards for Biology II focus on organism classification and evolution with in depth analysis of plants and animals. Honors standards and expectations will apply.

Chemistry I- Students should explore these chemistry concepts and the seven core concepts (patterns; cause and effect; scale, proportion, and quantity; systems and system models; energy and matter; structure and function; and, stability and change) through laboratory techniques, manipulation of chemical quantities, and problem-solving practices. Within the Chemistry I standards, scientific and engineering practices are embedded as a means to learn about specific topics identified for the course. Engaging in these practices with current applications will help students become scientifically literate and astute consumers of scientific information.

Honors Chemistry I- Students should explore these chemistry concepts and the seven core concepts (patterns; cause and effect; scale, proportion, and quantity; systems and system models; energy and matter; structure and function; and, stability and change) through laboratory techniques, manipulation of chemical quantities, and problem-solving practices. Within the Chemistry I standards, scientific and engineering practices are embedded as a means to learn about specific topics identified for the course. Engaging in these practices with current applications will help students become scientifically literate and astute consumers of scientific information. Honors standards and expectations will apply.

Honors Chemistry II- The Chemistry II standards build on topics that were introduced in Chemistry I with increased rigor. Students should explore these advanced chemistry concepts and the seven core concepts (patterns; cause and effect; scale, proportion, and quantity; systems and system models; energy and matter; structure and function; and, stability and change) through laboratory techniques, manipulation of chemical quantities, and advanced problem-solving practices. Within the Chemistry II standards, scientific and engineering practices are embedded as a means to learn about specific topics identified for the course. Engaging in these practices with current applications will help students become scientifically literate and astute consumers of scientific information. Honors standards and expectations will apply.

Honors Physics- Properties of matter give rise to fields and forces. Students should understand that there are only a few properties of matter at a fundamental level and that these properties (charge, mass, spin) give rise to the fields and forces that exist as we understand them. An understanding of the forces and interactions between objects is important for describing an object's motion and determining the stability in a system. The concept of the transfer of energy in or out of a system can be explained and predicted. Optics is the study of the interaction of optical photons (within the human visible range) with matter. Honors expectations will apply.

Honors Anatomy & Physiology- The academic standards for high school Human Anatomy and Physiology are built on the foundation provided by Biology I (a prerequisite course) and are research-based, supported by the National Research Council's Framework for K-12 Science Education. Human Anatomy and Physiology provides students with the opportunity to focus on a particular aspect of life science in more detail while continuing to provide knowledge that is rooted in the same crosscutting concepts and practices utilized throughout all of the sciences. The academic standards for Human Anatomy and Physiology are focused on an in depth analysis of the human organ systems and how they function to support life. Honors standards and expectations will apply.

SOCIAL STUDIES

World History & Geography- Students will study the rise of the nation-state in Europe, the origins and consequences of the Industrial Revolution, political reform in Western Europe, imperialism across the world, and the economic and political roots of the modern world. Students will explain the causes and consequences of the great military and economic events of the past century, including the World Wars, Great Depression, Cold War, and Russian and Chinese Revolutions. Students will study the rise of nationalism and the continuing persistence of political, ethnic, and religious conflict in many parts of the world. Students will explore geographic influences on history, with attention to political boundaries that developed with the evolution of nations from 1750 to the present and the subsequent human geographic issues that dominate the global community. Additionally, students will examine aspects of technical geography and how these innovations continuously impact geopolitics in the contemporary world.

Honors World History & Geography- Students will study the rise of the nation-state in Europe, the origins and consequences of the Industrial Revolution, political reform in Western Europe, imperialism across the world, and the economic and political roots of the modern world. Students will explain the causes and consequences of the great military and economic events of the past century, including the World Wars, Great Depression, Cold War, and Russian and Chinese Revolutions. Students will study the rise of nationalism and the continuing persistence of political, ethnic, and religious conflict in many parts of the world. Students will explore geographic influences on history, with attention to political boundaries that developed with the evolution of nations from 1750 to the present and the subsequent human geographic issues that dominate the global community. Additionally, students will examine aspects of technical geography and how these innovations continuously impact geopolitics in the contemporary world. Honors standards and expectations will apply.

Ancient History- Students will examine the social, geographic, religious, economic, and cultural aspects of major periods of ancient history from prehistoric times to 1500 CE. Students will explore the development of river valley civilizations, the Gupta Empire, the Roman Empire, Classical Greece, Islamic civilizations, American and African civilizations, and the Middle Ages through the beginnings of the Renaissance.

US History- Students will examine the causes and consequences of the Industrial Revolution and the United States' growing role in world diplomatic relations, including the Spanish-American War and World War I. Students will study the goals and accomplishments of the Progressive movement and the New Deal. Students will also learn about the various factors that led to our nation's entry into World War II, as well as the consequences for American life. Students will explore the causes and course of the Cold War. Students will study the important social, cultural, economic, and political changes that have shaped the modern-day U.S. resulting from the Civil Rights Movement, Cold War, and recent events and trends. Additionally, students will learn about the causes and consequences of contemporary issues impacting the world today.

Honors US History- Students will examine the causes and consequences of the Industrial Revolution and the United States' growing role in world diplomatic relations, including the Spanish-American War and World War I. Students will study the goals and accomplishments of the Progressive movement and the New Deal. Students will also learn about the various factors that led to our nation's entry into World War II, as well as the consequences for American life. Students will explore the causes and course of the Cold War. Students will study the important social, cultural, economic, and political changes that have shaped the modern-day U.S. resulting from the Civil Rights Movement, Cold War, and recent events and trends. Additionally, students will learn about the causes and consequences of contemporary issues impacting the world today. Honors standards and expectations will apply.

AP US History A/B- Students will examine the causes and consequences of the Industrial Revolution and the United States' growing role in world diplomatic relations, including the Spanish-American War and World War I. Students will study the goals and accomplishments of the Progressive movement and the New Deal. Students will also learn about the various factors that led to our nation's entry into World War II, as well as the consequences for American life. Students will explore the causes and course of the Cold War. Students will study the important social, cultural, economic, and political changes that have shaped the modern-day U.S. resulting from the Civil Rights Movement, the Cold War, and recent events and trends. Additionally, students will learn about the causes and consequences of contemporary issues impacting the world today. Honors standards and expectations will apply. Students will prepare to take the Advanced Placement exam for possible college credit. This will be an intensive and comprehensive curriculum and will consist of advanced analytical, writing, and verbal skills. Students scoring 3 or better may earn college credit. AP standards and expectations will apply. This is a 2 semester course (same school year).

Economics- Students will examine the allocation of scarce resources and consider the economic reasoning used by consumers, producers, savers, investors, workers, and voters. Students will explore the concepts of scarcity, supply and demand, market structures, national economic performance, money and the role of financial institutions, economic stabilization, and trade. Finally, students will examine key economic philosophies and economists who have and continue to influence economic decision making.

Honors Economics- Students will examine the allocation of scarce resources and consider the economic reasoning used by consumers, producers, savers, investors, workers, and voters. Students will explore the concepts of scarcity, supply and demand, market structures, national economic performance, money and the role of financial institutions, economic stabilization, and trade. Finally, students will examine key economic philosophies and economists who have and continue to influence economic decision making. Honors standards and expectations will apply.

Personal Finance- Personal Finance is a foundational course designed to inform students how individual choices directly influence occupational goals, future earning potential, and long term financial well-being. The standards in this course cover decision-making skills related to goal setting, earning potential, budgeting, saving, borrowing, managing risk, and investing. The course helps students meet the growing complexities of personal financial management and consumer decision making. Upon completion of this course, proficient students will understand how their decisions will impact their future financial well-being.

Honors Personal Finance- Personal Finance is a foundational course designed to inform students how individual choices directly influence occupational goals, future earning potential, and long term financial well-being. The standards in this course cover decision-making skills related to goal setting, earning potential, budgeting, saving, borrowing, managing risk, and investing. The course helps students meet the growing complexities of personal financial management and consumer decision making. Upon completion of this course, proficient students will understand how their decisions will impact their future financial well-being. Honors standards and expectations will apply.

US Government- Students will study the purposes, principles, and practices of American government as established by the United States Constitution. Students will learn the structure and processes of the government of the state of Tennessee and local governments. Students will recognize their rights and responsibilities as citizens as well as how to exercise these rights and responsibilities at the local, state, and national levels.

Honors US Government- Students will study the purposes, principles, and practices of American government as established by the United States Constitution. Students will learn the structure and processes of the government of the state of Tennessee and local governments. Students will recognize their rights and responsibilities as citizens as well as how to exercise these rights and responsibilities at the local, state, and national levels. Honors standards and expectations will apply.

American Business Legal Systems- The American Business Legal Systems course provides students with an understanding of the legal framework in which American business functions. The students will evaluate the influence of the free enterprise system in a democratic society on daily decisions. Students will analyze the alliance between capitalism and democracy and be better prepared to influence future decisions in the public and private sectors of the United States of America.

Honors American Business Legal Systems- The American Business Legal Systems course provides students with an understanding of the legal framework in which American business functions. The students will evaluate the influence of the free enterprise system in a democratic society on daily decisions. Students will analyze the alliance between capitalism and democracy and be better prepared to influence future decisions in the public and private sectors of the United States of America. Honors standards and expectations will apply.

Psychology- Students will study the development of scientific attitudes and skills, including critical thinking, problem solving, and scientific methodology. Students will also examine the structure and function of the nervous system in humans, the processes of sensation and perception, lifespan development, and memory, including encoding, storage, and retrieval of memory. Students will look at perspectives of abnormal behavior and categories of psychological disorders, including treatment thereof. Students will elaborate on the importance of drawing evidence-based conclusions about psychological phenomena and gain knowledge on a wide array of issues on both individual and global levels. Students will examine social and cultural diversity as well as diversity among individuals. Throughout the course, students will examine connections between content areas within psychology and relate psychological knowledge to everyday life while exploring the variety of careers available to those who study psychology.

Sociology- Students will explore the ways sociologists view society and how they study the social world. Students will examine culture, socialization, deviance, and the structure and impact of institutions and organizations as well as selected social problems and how change impacts individuals and societies. The following standards reflect those recommended by the American Sociological Association.

FORGEIN LANGUAGE

Spanish I- Students completing this course are able to understand questions, conversations, and instructions in Spanish and study Spanish using the four skills of language learning. These include listening, speaking, reading, and writing. An emphasis is placed on vocabulary and grammatical structure. Spanish culture and Spanish-speaking countries are also reviewed.

Spanish II- This course is a continuation of the material explored in Spanish I. Students completing this course are able to understand questions, conversations, and instructions in Spanish and study Spanish using the four skills of language learning. These include listening, speaking, reading, and writing. An emphasis is placed on vocabulary and grammatical structure. Spanish culture and Spanish-speaking countries are also reviewed.

Honors Spanish III- Teacher recommendation required. Students should successfully complete Spanish I & II prior to this class. This course enables the student to reinforce the oral and writing skills acquired in Spanish I & II. Applying and understanding expanded vocabulary and increasing the speaking, reading, and writing skills are included. Honors standards and expectations will apply.

French I- Students will be able to understand everyday questions and simple conversations. Students will use the four skills of foreign language: listening, speaking, reading, and writing. Students will be exposed to French costumes, history, and culture.

French II- This course is a continuation of the material explored in French I. Students will be able to understand everyday questions and simple conversations. Students will use the four skills of foreign language: listening, speaking, reading, and writing. Students will be exposed to French costumes, history, and culture.

Honors French III- Teacher recommendation required. Students should successfully complete French I & II prior to this class. This course enables the student to reinforce the oral and writing skills acquired in French I & II. Applying and understanding expanded vocabulary and increasing the speaking, reading, and writing skills are included. Honors standards and expectations will apply.

FINE ARTS

Music History- Music History courses provide students with an understanding of music, its importance, and context in a selected range of historical periods and/or cultural styles. Students also have the ability for informal music performance and creation within the classroom. There is no set bank of standards for Music History; however, courses may draw from the established standards for general music, music theory, instrumental music, and vocal music. Major work of the grade may engage students primarily within the Respond and Connect domains.

Chorus I- Chorus courses develop students' vocal skills within the context of a large choral ensemble in which they perform a variety of styles of repertoire. This course is designed to develop students' vocal techniques and their ability to sing parts and include experiences in creating and responding to music.

Chorus II- A continuation of Chorus I, developing students' vocal skills within the context of a large choral ensemble in which they perform a variety of styles of repertoire. This course is designed to develop students' vocal techniques and their ability to sing parts and include experiences in creating and responding to music.

Chorus III- This class is an advanced group that will focus on higher level vocal development and will involve multiple performances. The group will be limited in size and teacher approval is required. Ensemble participation for the members is expected.

Vocal Ensemble- This class is an advanced group that will focus on higher level vocal development and will involve multiple performances. The group will be limited in size and teacher approval is required. Ensemble participation for the members is expected.

General (Marching) Band I- General Band courses help students develop techniques for playing brass, woodwind, and percussion instruments and their ability to perform a variety of concert band literature styles. These courses may emphasize rehearsal and performance experiences in a range of styles (e.g., concert, marching, orchestral, and modern) and also include experiences in creating and responding to music.

Concert Band I- Courses in Concert Band are designed to promote students' technique for playing brass, woodwind, and percussion instruments and cover a variety of band literature styles, primarily for concert performances and also include experiences in creating and responding to music.

Guitar- Guitar courses provide students an introduction to, and refine the fundamentals of music and guitar literature and techniques, such as strumming and chords and may offer instruction in more advanced techniques. These courses may include bass, ukulele and other plucked string instruments. Formal and informal performances are typically included as well as experiences in creating and responding to music.

Visual Art I- Visual Arts: Comprehensive courses enable students to explore one or several art forms (e.g., drawing, painting, two- and three-dimensional design, and sculpture) and to create individual works of art. Initial courses emphasize observations, interpretation of the visual environment, visual communication, imagination, and symbolism. Courses cover the language, materials, media, and processes of a particular art form and the design elements used. Advanced courses encourage students to refine their skills while also developing their own artistic styles following and breaking from traditional conventions. Courses may also include the study of major artists, art movements, and styles.

Visual Art II- This course expands on the skills learned in Visual Art I and is designed for students that excel in this area. This class takes a creative, historical, and critical approach to learning about art. Students work with all types of media to develop drawing and painting skills as well as producing original artwork.

Visual Art III- This class is designed for the serious art student who is interested in pursuing an art or art-related career. Visual Art III students will build their portfolio for art showcases. Instructor approval required.

Visual Art IV- This class is designed for the serious art student who is interested in pursuing an art or art-related career. Visual Art IV students will continue to build their portfolio for art showcases. Instructor approval required.

Theater Art I- Theater courses help students experience and develop skills in one or more aspects of theatrical production. Introductory courses provide an overview of theatrical elements including acting, set design, stage management, directing, playwriting, and production. Advanced courses concentrate on extending and refining dramatic technique, expanding students' exposure to different types of theatrical styles, genres, and traditions, and increasing their participation in public productions.

Theater Art II- Stagecraft and set design teaches the techniques of staging including set design and construction, lighting design, and costume design through lecture, demonstration, and hands-on experience.

Theater Art III/Technical Theater- The technical theater class will explore all elements that support the play and acting on stage. This includes lights, sound, set, costumes, make-up, special effects, publicity, and management. Students will be in charge of every aspect of two productions during the class and have the opportunity to work in all capacities. We will discover how there are many supporting jobs in the theater besides the actors.

Piano I- Piano courses provide students an introduction to, and refine the fundamentals of music and keyboard including literature and techniques such as scales, chords, and melodic lines and may offer instruction in more advanced techniques. Formal and informal performances are typically included as well as experiences in creating and responding to music.

Piano II- This class is a continuation of Piano I, students will continue the skills that were developed and expand on them. Formal and informal performances are typically included as well as experiences in creating and responding to music.

AP Studio Art 2D Design- Students in AP art will work towards developing a comprehensive vocabulary of art. This involves viewing, analyzing, and creating work in a wide variety of media. College credit may be earned through an advanced placement exam. Fees will apply.

AP Drawing- Students have the opportunity to earn college credit by completing and submitting a portfolio of 24 pieces of art. Students should complete Art 1 and an Advanced Art class before enrolling in AP art.

PHYSICAL EDUCATION

Lifetime Wellness- This class is a combination of classroom work and physical fitness. The course content consists of seven interrelated strands which include the following: nutrition, personal fitness and related skills, mental health, disease prevention and control, substance use and abuse, sexuality, family life, and first aid.

Physical Education- This course provides an opportunity for students to participate in and learn the rules and strategies of a variety of individual and dual sports such as bowling, jump roping, tennis, and badminton. This course will also include an opportunity for students to participate in and learn a variety of fitness activities that promotes individual responsibility for optimal well-being.

PE Weightlifting Football- This course is designed for the highly competitive athlete. Students will study rules, strategies, and training techniques of football. This class will also include appropriate weight lifting. Instructor approval required.

PE Boys Basketball- This course is designed for the highly competitive athlete. Students will study rules, strategies, and training techniques of basketball. This class will also include appropriate weight lifting. Instructor approval required.

PE Girls Basketball- This course is designed for the highly competitive athlete. Students will study rules, strategies, and training techniques of basketball. This class will also include appropriate weight lifting. Instructor approval required.

PE Boys Baseball- This course is designed for the highly competitive athlete. Students will study rules, strategies, and training techniques of baseball. This class will also include appropriate weight lifting. Instructor approval required.

PE Girls Softball- This course is designed for the highly competitive athlete. Students will study rules, strategies, and training techniques of softball. This class will also include appropriate weight lifting. Instructor approval required.

Weight Lifting- This course introduces basic weight lifting and cardiovascular endurance techniques.

ALTERNATIVE DIPLOMA ELECTIVES

Principles of Transition: Focus on Adulthood - Principles of Transition: Focus on Adulthood is designed to equip students with the knowledge and skills necessary to transition into postsecondary community involvement and independent living. Through a series of in-class and out-of-class activities, students will refine their self-awareness through a discovery process and then learn about relevant community support and how to access them.

Principles of Transition: Planning for Postsecondary - Principles of Transition: Planning for Postsecondary is designed to provide opportunities for students to finalize their postsecondary transition plans and develop concrete steps necessary to transition seamlessly into postsecondary, including being an active participant in developing a summary of performance.

Principles of Transition: Introduction to Self-determination -Principles of Transition: Introduction to Self-determination is designed to equip students with the knowledge concerning the legal rights of individuals with a disability and how to advocate for themselves in their school and community settings.

COLLEGE, CAREER, & TECHNICAL EDUCATION

CTE programs of study are intentionally designed to build upon a set of knowledge and skills that deepen in content and naturally prepare and progress a student through this learning. Students must complete courses in the sequence outlined in the course catalog. All courses are assigned levels and must be completed in order.

Advanced Manufacturing Career Cluster

EPSO: Industry Certifications in Advanced Manufacturing Available

- **OSHA 10 Certification**
- **NIMS Certification**
- **AWS SENSE Certification**

Principles of Manufacturing (Course 1)– Principles of Manufacturing is designed to provide students with exposure to various occupations and pathways in the Advanced Manufacturing career cluster, such as Machining Technology, Electromechanical Technology, Mechatronics, and Welding. In order to gain a holistic view of the advanced manufacturing industry, students will complete all core standards, as well as standards in two focus areas. Throughout the course, they will develop an understanding of the general steps involved in the manufacturing process and master the essential skills to be an effective team member in a manufacturing production setting. Course content covers basic quality principles and processes, blueprints and schematics, and systems. Upon completion of this course, proficient students will advance from this course with a nuanced understanding of how manufacturing combines design and engineering, materials science, process technology, and quality. Upon completion of the Principles of Manufacturing course, students will be prepared to make an informed decision regarding which Advanced Manufacturing program of study to pursue.

Dual Machining Technology I (Course 2)– is designed to provide students with the skills and knowledge to be effective in production environments as a machinist, CNC operator, or supervisor. Upon completion of this course, proficient students will demonstrate safety practices concerning machining technology, proper measurement and layout techniques, reading and interpreting drawings and blueprints, production design processes, and quality control procedures. Upon completion of this course, students will be knowledgeable about potential postsecondary education and career opportunities related to machining technology and will be prepared to enroll in more advanced machining courses in high school.

Dual Machining Technology II (Course 3) – is an advanced level contextual course that builds on the introductory skills learned in the entry-level manufacturing and machining courses, stressing the concepts and practices in a production environment supported by advanced machining and engineering facilities. Working with the course instructor and team members in a cooperative learning environment, students will design, produce, and maintain products that are defined by detailed technical specifications. Emphasis is placed on quality control, safety and engineering codes and standards, and production-grade machining systems, building on the learner's past knowledge, current experiences, and future conduct as a career machinist. Upon completion of this course, proficient students will be able to examine blueprints and specification drawings to plan and implement the manufacture of products, machine parts to specifications using both manual and computer-controlled machine tools, and measure, examine, and test completed products to check for defects and conformance to specifications.

Dual Welding I (Course 2) – is designed to provide students with the skills and knowledge to effectively perform cutting and welding applications used in the advanced manufacturing industry. Proficient students will develop proficiency in fundamental safety practices in welding, interpreting drawings, creating computer aided drawings, identifying and using joint designs, efficiently laying out parts for fabrication, basic shielded metal arc welding (SMAW), mechanical and thermal properties of metals, and quality control. Upon completion of this course, proficient students will be able to sit for the AWS SENSE Entry Level Welder certification and will be prepared to undertake more advanced welding coursework

Dual Welding II (Course 3)– is designed to provide students with opportunities to effectively perform cutting and welding applications of increasing complexity used in the advanced manufacturing industry. Proficient students will build on the knowledge and skills of the Welding I course and apply them in novel environments, while learning additional welding techniques not covered in previous courses. Specifically, students will be proficient in (1) fundamental safety practices in welding, (2) gas metal arc welding (GMAW), (3) flux cored arc welding (FCAW), (4) gas tungsten arc welding (GTAW), and (5) quality control methods. Upon completion of the Welding II course, proficient students will be eligible to complete the American Welding Society (AWS) Entry Welder or the AWS SENSE Advanced Welders qualifications and certifications.

Advanced Manufacturing Cluster Courses are to be taken in the following order:

Machining Technology
Principles of Manufacturing
Dual Machining Technology I
Dual Machining Technology II

Welding
Principles of Manufacturing
Dual Welding I
Dual Welding II

Agriculture Career Cluster

EPSO: Industry Certifications in Agriculture Available

- OSHA 10 Certification
- Briggs and Stratton Basic Small Engine Certification
- BASF Plant Science
- TSIC Animal Science

Agriscience (Course 1) – Agriscience is an introductory laboratory science course that prepares students for biology, subsequent science and agriculture courses, and postsecondary study. This course helps students understand the important role that agricultural science and technology plays in the twenty-first century. In addition, it serves as the first course for all programs of study in the Agriculture, Food, & Natural Resources cluster. Upon completion of this course, proficient students will be prepared for success in more advanced agriculture and science coursework. This course counts as a lab science credit toward graduation requirements.

Agriculture Power and Equipment (Course 3) – an applied course in agricultural engineering with special emphasis on laboratory activities involving small engines, tractors, and agricultural equipment. The standards in this course address navigation, maintenance, repair, and overhaul of electrical motors, hydraulic systems, and fuel powered engines as well as exploration of a wide range of careers in agricultural mechanics. Upon completion of this course, proficient students will be able to pursue advanced training in agricultural engineering and related fields at a postsecondary institution.

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Dual Horticulture Science (Course 3) – is an applied–knowledge course designed to prepare students to manage greenhouse operations. This course covers principles of greenhouse structures, plant health and growth, growing media, greenhouse crop selection and propagation, and management techniques. Upon completion of this course, proficient students will be equipped with the technical knowledge and skills needed to prepare for further education and careers in horticulture production. Greenhouse Management is a dual credit course, fees will apply.

Dual Veterinary & Animal Science (Course 3)– an advanced course in animal science and care for students interested in learning more about becoming a veterinarian, vet tech, vet assistant, or pursuing a variety of scientific, health, or agriculture professions. This course covers principles of health and disease, basic animal care and nursing, clinical and laboratory procedures, and additional industry–related career and leadership knowledge and skills. Upon completion of this course, students will be able to pursue advanced study of veterinary science at a postsecondary institution.

Principles of Plant Science (Course 2) – is an applied–knowledge course designed to prepare students to manage greenhouse operations. This course covers principles of greenhouse structures, plant health and growth, growing media, greenhouse crop selection and propagation, and management techniques. Upon completion of this course, proficient students will be equipped with the technical knowledge and skills needed to prepare for further education and careers in horticulture production.

Landscaping and Turf Science (Course 4)– an applied course designed to provide challenging academic standards and relevant technical knowledge and skills needed for further education and careers in landscape design, maintenance, and turf management. Content includes site analysis and planning, principles of design, and plant selection and care techniques. Upon completion of this course, proficient students will be prepared to pursue advanced study of landscaping and turf science at a postsecondary institution.

Large Animal Science (Course 3)– is an applied course in veterinary and animal science for students interested in learning more about becoming a veterinarian, vet tech, vet assistant, or pursuing a variety of scientific, health, or agriculture professions. This course covers anatomy and physiological systems of different groups of large animals, as well as careers, leadership, and history of the industry. Upon completion of this course, proficient students will be prepared for success in the level–four Veterinary Science course and further postsecondary training.

Principles of Agriculture Mechanics (Course 2)– an intermediate course introducing students to basic skills and knowledge in construction and land management for both rural and urban environments. This course covers topics including project management, basic engine and motor mechanics, land surveying, irrigation and drainage, agricultural structures, and basic metalworking techniques. Upon completion of this course, proficient students will be prepared for more advanced coursework in agricultural mechanics.

Small Animal Science (Course 2)– Small Animal Science is an intermediate course in animal science and care for students interested in learning more about becoming a veterinarian, vet tech, vet assistant, or pursuing a variety of scientific, health, or agriculture professions. This course covers anatomy and physiological systems of different groups of small animals, as well as careers, leadership, and history of the industry. Upon completion of this course, proficient students will be prepared for more advanced coursework in veterinary and animal science.

Supervised Agriculture Experience (SAE) (Can be taken at any time) – SAE is a structured experiential learning opportunity that takes place in a setting outside of regular school hours. Individual LEAs can choose whether or not to offer credit, provided participating students demonstrate mastery of the standards outlined below. SAEs allow students to experience the diversity of agriculture and natural resources industries and to gain exposure to agricultural-related career pathways. SAEs require a documented formal project scope, accurate recordkeeping, and student advisor supervision.

Veterinary Science (Course 4)– a course in animal science and care for students interested in learning more about becoming a veterinarian, vet tech, vet assistant, or pursuing a variety of scientific, health, or agriculture professions. This course covers principles of health and disease, basic animal care and nursing, clinical and laboratory procedures, and additional industry-related career and leadership knowledge and skills. Upon completion of this course, students will be able to pursue advanced study of veterinary science at a postsecondary institution.

Agriculture Cluster Courses are to be taken in the following order:

Agriculture Engineering

Agriscience
Principles of Ag. Mechanics
Agriculture Power Equipment

Horticulture Science

Agriscience
Principles of Plant Science
Dual Horticulture Science I
Landscaping & Turf Science

Veterinary Science

Agriscience
Small Animal Science
Large Animal Science
Dual Vet Animal Science/
Veterinary Science

Architecture & Construction Career Cluster

Industry Certifications in Architecture & Construction Available

- OSHA 10 Certification

Fundamentals of Construction (Course 1)– Fundamentals of Construction is a foundational course in the Architecture & Construction cluster covering essential knowledge, skills, and concepts required for careers in construction. Upon completion of this course, proficient students will be able to describe various construction fields and outline the steps necessary to advance in specific construction careers. Students will be able to employ tools safely and interpret construction drawings to complete projects demonstrating proper measurement and application of mathematical concepts. Standards in this course also include an overview of the construction industry and an introduction to building systems and materials. Students will begin compiling artifacts for inclusion in their portfolios, which they will carry with them throughout the full sequence of courses in their selected program of study. Early Postsecondary Opportunity (EPSO)– Industry Certification

Dual MEP/HVAC I (Course 3)– prepares students for electrical, plumbing, and HVAC careers by introducing students to the physical principles of these systems and the fundamental skills needed to work with them. Upon completion of this course, proficient students will be able to follow safety procedures and use tools to perform basic operations with electrical circuits, as well as demonstrate understanding in fundamental concepts of electricity theory (i.e. Ohm's Law). Students will be able to apply proper tools and procedures to perform basic operations with plastic piping, including measuring, cutting, and joining pipe. Furthermore, students will be able to apply mathematics concepts to solve HVAC, electrical, and plumbing problems. Standards in this course also include principles of the construction industry and business and project management. Students will continue compiling artifacts for inclusion in their portfolios, which they will carry with them throughout the full sequence of courses in this program of study. Dual enrollment credit may be earned, fees will apply.

Dual MEP/HVAC II (Level 3)– prepares students for careers in residential and commercial heating, ventilation, air conditioning, and refrigeration. Upon completion of this course, proficient students will be able to demonstrate knowledge and skill in performing basic operations with HVAC systems, with emphasis on safety, tools, and equipment specific to HVAC. In addition, students will be able to explain the functions and components of heating, cooling, and air distribution systems. They will demonstrate basic techniques to prepare piping and tubing for HVAC systems including performing soldering and brazing. Students will understand proper refrigerant management in preparation for EPA Section 608 Technician Certification. They will read and interpret drawings, specifications, and diagrams to determine materials needed to complete an HVAC project. Standards in this course also introduce basic troubleshooting and maintenance procedures and alternate power systems, and expand on principles of the construction industry, delving deeper into business and project management. Students will continue compiling artifacts for inclusion in their portfolios, which they will carry with them throughout the full sequence of courses in this program of study. Dual enrollment credit may be earned, fees will apply.

Structural Systems (Level 2)I– prepares students for careers in residential and commercial carpentry. Upon completion of this course, proficient students will be able to demonstrate knowledge and skill in framing buildings. Students will be able to frame floors, walls, ceilings, roofs, and stairs while safely employing tools and interpreting construction drawings to complete projects. Emphasis is placed on demonstrating proper measurement and application of mathematical concepts. Standards in this course also include principles of the construction industry and business and project management. Students will continue compiling artifacts for inclusion in their portfolios, which they will carry with them throughout the full sequence of courses in this program of study.

Structural Systems II (Level 3)– Structural Systems II is an advanced-level course that builds on the introductory skills learned in the Fundamentals of Construction and Structural Systems I courses. This course will explore advanced framing, the physics of structural loads, and the coverings and finishes of structural systems. Upon completion of this course, proficient students will be able to install interior and exterior finishing, including roofing, siding, thermal and moisture protection components, drywall, doors, and trim. Throughout the course, students will interpret construction drawings to complete projects, implementing material estimating procedures and safe working practices. Standards in this course also expand on principles of the construction industry and delve deeper into business and project management strategies. Students will continue compiling artifacts for inclusion in their portfolios, which they will carry with them throughout the full sequence of courses in this program of study.

Dual Structural Systems I (Level 3)– intended to provide students with the opportunity to apply the skills and knowledge learned in previous Architecture & Construction courses within a professional, working environment. In addition to developing an understanding of the professional and ethical issues encountered by tradesmen and contractors in the workplace, students learn to refine their skills in problem solving, communication, teamwork, and project management in the completion of a course-long project. Due to the importance of on-the-job training in the construction industry, a principle aim of the practicum is to assist students with placements where on-the-job training occurs, if available, so they can begin to log hours on a worksite and gain experience prior to entering the job market, such as in pre-apprenticeships. Additionally, students are exposed to the great range of postsecondary opportunities in today's construction fields as well, in order to prepare them to make an informed decision regarding their post-high school plans. Dual enrollment will be earned, fees will apply.

Architecture & Construction Cluster Courses are to be taken in the following order:

Mechanical, Electrical, & Plumbing (MEP)

Fundamentals of Construction
Dua MEP/HVAC I
Dual MEP/HVAC II

Architecture & Construction

Fundamentals of Construction
Structural Systems I
Structural Systems II
Dual Structural Systems I
Dual Structural Systems I

Arts, Audio/Visual Technology & Communications Career Cluster

Industry Certifications in Arts, Audio/Visual Tech & Comm Available

- **Adobe Certified Associate Certification**

Digital Arts and Design I (Course 1 of 3)

Digital Arts & Design I is a foundational course in the Arts, A/V Technology, & Communications cluster for students interested in art and design professions. The primary aim of this course is to build a strong understanding of the principles and elements of design and the design process. Upon completion of this course, proficient students will be able to utilize industry tools to conceptualize and create communications solutions which effectively reach targeted audiences. Students will acquire basic skills in illustration, typography, and photography. Standards in this course include career exploration, an overview of the history of design, basic business management, and legal issues. In addition, students will begin compiling artifacts for inclusion in a digital portfolio, which they will carry with them throughout the full sequence of courses in this program of study.

Digital Arts and Design II (Course 2 of 3)

A course that builds on the basic principles and design process learned in the introductory Digital Arts & Design I course. Upon completion of this course, proficient students will be able to perform advanced software operations to create photographs and illustrations of increasing complexity. Students will employ design principles and use industry software to create layouts for a variety of applications. Standards in this course also include an overview of art and design industries, career exploration, and business management. In addition, students will continue compiling artifacts for inclusion in a digital portfolio, which they will carry with them throughout the full sequence of courses in this program of study.

Digital Arts and Design III (Course 3 of 3)

Applying design skills developed in prior courses, students will expand their creative and critical thinking skills to create comprehensive multimedia projects and three-dimensional designs. Upon completion of this course, proficient students will be able to use industry-standard software to create multimedia projects, web pages, three-dimensional models, and animations. Students will utilize research techniques to plan and enhance project outcomes. Standards in this course also include professionalism and ethics, career exploration, and business and project management. In addition, students will continue compiling artifacts for inclusion in a digital portfolio, which they will carry with them throughout the full sequence of courses in this program of study.

Business Management & Administration Career Cluster

Industry Certifications in Business & Admin Available

- Express Employment

Introduction to Business and Marketing (Course 1 of 3)– Introduction to Business and Marketing is an introductory course designed to give students an overview of the Business Management and Administration, Marketing, and Finance career clusters. The course helps students prepare for the growing complexities of the business world by examining basic principles of business, marketing, and finance in addition to exploring key aspects of leadership, ethical and social responsibilities, and careers. Students’ academic skills in communications, mathematics, and economics are reinforced with activities modeled in the context of business topics. Upon completion of this course, proficient students will be equipped with the foundational skills to succeed in any of the Business, Marketing, or Finance programs of study and will be prepared to make an informed decision regarding which pathways they would like to pursue in high school.

Business Communications (Course 2 of 3)– is a course designed to develop students’ effective oral and electronic business communications skills. This course develops skills in multiple methods of communications, including social media, as well as electronic publishing, design, layout, composition, and video conferencing. Upon completion of this course, proficient students will be able to demonstrate successful styles and methods for professional business communications using the proper tools to deliver effective publications and presentations.

Business Management (Course 3 of 3)– focuses on the development of the planning, organizing, leading, and controlling functions required for the production and delivery of goods and services. This applied knowledge course addresses the management role of utilizing the businesses’ resources of employees, equipment, and capital to achieve an organization’s goals. Students will participate in a continuing project throughout the course in which, individually or in teams, they will present recommendations to improve an existing business. Local business partnerships are encouraged to provide resources for faculty and students. Upon completion of this course, proficient students will be able to complete a full review of an existing business and offer recommendations for improvement as would a management consultant.

Education & Training Career Cluster

Fundamentals of Education (Course 1 of 4) – Fundamentals of Education is a foundational course in the Teaching as a Profession program of study for students interested in learning more about becoming a teacher, school counselor, trainer, librarian, or speech–language pathologist. Upon completion of this course, proficient students will gain knowledge in the history of education in the United States, careers in education, and the influence of human development on learning. Artifacts will be created for inclusion in a portfolio, which will continue throughout the full sequence of courses.

Teaching as a Profession I (TAP I) (Course 2 of 4)– TAP I is an intermediate course for students interested in learning more about becoming a teacher, school counselor, trainer, librarian, or speech–language pathologist. This course covers the components of instruction, teaching strategies, types of assessments, student learning, special populations, and educational technology. Students will conduct observations of educators at work and create artifacts for a course portfolio, which will continue with them throughout the program of study. Upon completion of this course, proficient

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students will have a fundamental understanding of instructional strategies needed for becoming an educator.

Teaching as a Profession II/ Dual Teaching as a Profession (TAP II) (Course 3 of 4)– (TAP II) is an applied-knowledge course for students interested in learning more about becoming a teacher, school counselor, trainer, librarian, or speech-language pathologist. This course covers classroom management, concepts of higher order thinking, differentiating instruction, and strategies of effective classroom planning. Students in this course will demonstrate their skills in laboratory settings while building a course portfolio of work, which will carry with them throughout the program of study. Upon completion of this course, proficient students will be prepared to take the capstone TAP III course and further their studies at the postsecondary level.

Teaching as a Profession Practicum (Course 4 of 4)– is a capstone course for students interested in applying the knowledge and skills learned in previous courses toward becoming a teacher, school counselor, trainer, librarian, or speech-language pathologist. The course covers classroom professionalism, ethics, policies, communications, and career requirements in education and training fields. In addition, students will complete an internship and continue to create artifacts for their student portfolios. Upon completion of this course, proficient students will be prepared to pursue advanced training at a postsecondary institution.

Finance Career Cluster

EPSO: Industry Certifications in Finance Available

- **Quickbook Certified User Certification**

Introduction to Business and Marketing (Course 1 of 3)– Introduction to Business and Marketing is an introductory course designed to give students an overview of the Business Management and Administration, Marketing, and Finance career clusters. The course helps students prepare for the growing complexities of the business world by examining basic principles of business, marketing, and finance in addition to exploring key aspects of leadership, ethical and social responsibilities, and careers. Students' academic skills in communications, mathematics, and economics are reinforced with activities modeled in the context of business topics.

Accounting I (Course 2 of 3)– an essential course for students who wish to pursue careers in business and finance, or for those who wish to develop important skill sets related to financial literacy. Whether students aspire to be future business owners or work in finance with other companies, accounting skills are fundamental to success and applicable in many different fields. In this course, proficient Accounting students develop skills to analyze business transactions, journalize, post, and prepare worksheets and financial statements, and apply financial analysis to business processes. Additionally, students receive exposure to the ethical considerations that accounting professionals must face and the standards of practice governing their work, such as the GAAP (generally accepted accounting procedures) standards. Upon completion of this course, proficient students will be prepared to apply their accounting skills in more advanced Business and Finance courses, and ultimately pursue postsecondary training.

Dual Accounting I (Course 3 of 3)– advanced study of concepts, principles, and techniques used by businesses to maintain electronic and manual financial records. This course expands on content explored in Accounting I to cover the accounting processes of a variety of different firms, including merchandising, manufacturing, and service-oriented businesses. Upon completion of this course, proficient students will gain in-depth knowledge of business accounting procedures and their applications to business operations. Upon completion of this course, students will be prepared for postsecondary study and advanced training in accounting or business. Additionally, completion of

this course can lead to a work-based learning (WBL) experience as the program of study capstone. Dual enrollment credit will be earned, fees will apply.

Health Science Career Cluster

Industry Certifications in Health Science Available

- OSHA 10
- Certified Nursing Assistant Certification

Cardiovascular Services (Course 4)– is an applied course in the Diagnostic Services program of study intended to prepare students with an understanding of the roles and responsibilities of those seeking employment in the cardiovascular field of healthcare. Upon completion of this course, proficient students will have a thorough understanding of the anatomy and physiology of the heart and be knowledgeable about both invasive and non-invasive cardiovascular procedures. Students will incorporate communication, goal setting, and information collection skills to be successful in the workplace. Students who complete a Clinical Internship in addition to this course will be eligible upon graduation to sit for the Certified EKG Technician (CET) Exam. Relevant standards are indicated below with (CET).

Diagnostic Medicine (Course 2)– designed to prepare students to pursue careers in the fields of diagnostic medical imaging, medical laboratory testing, optometry, and other patient diagnostic procedures. Upon completion of this course, proficient students will be able to describe new and evolving diagnostic technologies, compare and contrast the features of healthcare systems, explain the legal and ethical ramifications of the healthcare setting, and begin to perform foundational healthcare skills. In addition, students will continue to add artifacts to a portfolio, which they will continue to build throughout the program of study.

Health Science Education (Course 1)– Health Science Education is an introductory course designed to prepare students to pursue careers in the fields of public health, therapeutics, health informatics, diagnostics, and support services. Upon completion of this course, a proficient student will be able to identify careers in these fields, compare and contrast the features of healthcare systems, explain the legal and ethical ramifications of the healthcare setting, and begin to perform foundational healthcare skills. This course will serve as a strong foundation for all of the Health Science programs of study. Early Postsecondary Opportunity (EPSO)– Industry Certification.

Honors Anatomy & Physiology (Course 2 or 3)– is designed to develop an understanding of the structures and functions of the human body, while relating those to knowledge and skills associated with pathophysiology. Upon completion of this course, proficient students will be able to (1) apply the gross anatomy from earlier courses to a deeper understanding of all body systems, (2) identify the organs and structures of the support and movement systems, (3) relate the structure and function of the communication, control, and integration system, and (4) demonstrate a professional, working understanding of the transportation, respiration, excretory, and reproduction systems. Honors standards and expectations will apply.

Honors Nursing Services (Course 4)– Nursing Education is a capstone course designed to prepare students to pursue careers in the field of nursing. Upon completion of this course, a proficient

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student will be able to implement communication and interpersonal skills, maintain residents' rights and independence, provide care safely, prevent emergency situations, prevent infection through infection control, and perform the skills required of a nursing assistant. At the conclusion of this course students may sit for the Certified Patient Care Technician (CPCT) exam, or if students have logged 40 hours of classroom instruction and 20 hours of classroom clinical instruction, and if they have completed 40 hours of site-based clinical with at least 24 of those hours spent in a long-term care facility through a Department of Health approved program, they are eligible to take the certification examination as a Certified Nursing Assistant (CNA). Honors standards and expectations will apply.

Medical Therapeutics (Course 2 or 3)– an applied course designed to prepare students to pursue careers in therapeutic and nursing services. Upon completion of this course, a proficient student will be able to identify careers in therapeutics services; assess, monitor, evaluate, and report patient/client health status; and identify the purpose and components of treatments.

Pharmacological Science (Course 4)– Pharmacological Sciences is a third-level applied course in the Therapeutic Services program of study intended to prepare students with an understanding of the roles and responsibilities of the healthcare worker in a pharmacy setting. This course equips students with the communication, goal-setting, and information-processing skills to be successful in the workplace, in addition to covering key topics in pharmacology, pharmacy law and regulations, sterile and non-sterile compounding, medication safety, quality assurance, and more. Upon completion of this course, proficient students who have also completed a Clinical Internship can apply to sit for the Pharmacy Technician Certification Board examination immediately after high school graduation.

Clinical Internship (Capstone or all Health Science Programs) – is a capstone course and work-based learning experience designed to provide students with real-world application of skills and knowledge obtained in a prerequisite Health Science course. Upon completion of this course, proficient students will be able to pursue certification in the pre-requisite course of Cardiovascular Services, Exercise Physiology, Medical Therapeutics or Pharmacological Science. Prior to beginning work at a clinical site, students must be certified in Basic Life Support (BLS) Cardiopulmonary Resuscitation (CPR), and deemed competent in basic first aid, body mechanics, Standard Precaution guidelines, and confidentiality

Health Science Cluster Courses are to be taken in the following order:

Diagnostic Services

Health Science Education
Diagnostic Medicine
Honors Anatomy & Physiology
Cardiovascular Services
Clinical Internship

Emergency Services

Health Science Education
Medical Therapeutics
Honors Anatomy & Physiology
Clinical Internship

Nursing Services

Health Science Education
Medical Therapeutics
Honors Anatomy & Physiology
Honors Nursing Education

Therapeutic Services

Health Science Education
Medical Therapeutics
Honors Anatomy & Physiology
Pharmacological Science
Clinical Internship

Hospitality & Tourism Career Cluster

CULINARY ARTS

Industry Certifications Available

- **ServSafe Food Manager Certification**

Culinary Arts I (Course 1 of 4)

Culinary Arts equips students with the foundational knowledge and skills to pursue careers in the culinary field as competent entry-level quick service and fast food employees. Upon completion of this course, proficient students will have knowledge in the components of commercial kitchen safety and sanitation, history of the foodservice industry, hospitality careers, nutritional concepts, recipe basics, proper kitchen tools and equipment, and kitchen staples. Throughout the course students will gain experience in commercial food production and service operations, while preparing for further training in the culinary arts program of study at the secondary and postsecondary levels. Artifacts will be created for inclusion in a portfolio, which will continue throughout the full sequence of courses. In addition to implementing the following standards, the course should include a suggested 30 hours spent in a commercial kitchen laboratory.

Culinary Arts II (Course 2 of 4)

Prerequisite: Culinary I

An applied-knowledge course to prepare students for careers in the culinary field as a prep cook, line cook, catering assistant, and many other entry-level food and beverage industry career paths. Upon completion of this course, proficient students will have a working knowledge of commercial kitchen safety and sanitation, menu planning, food presentation, purchasing and inventory, cooking principles, and food preparation. Students will gain experience in commercial food production and service operations, while preparing for further training in the culinary arts program of study at the secondary and postsecondary levels. Artifacts will be created for inclusion in a portfolio, which will continue throughout the full sequence of courses. In addition to implementing the following standards, the course should include a suggested 30 hours spent in a commercial kitchen laboratory.

Culinary Arts III (Course 3 of 4)

Prerequisite: Culinary I & II (Final Gd.> 75%)

An advanced course intended to further equip students with the skills and knowledge needed to pursue a variety of careers in the culinary field. Upon completion of the course, students will be proficient in components of commercial kitchen safety and sanitation, dining room service, food preparation and presentation, bakeshop preparation skills and equipment, and advanced cooking principles. Students will gain experience in commercial food production and service operations, while preparing for further training at the postsecondary level. Artifacts will be created for inclusion in a portfolio, which will continue throughout the full sequence of courses. In addition to implementing the following standards, the course should include a suggested 30 hours spent in a commercial kitchen laboratory.

Culinary Arts IV (Course 4 of 4)

Prerequisite: Culinary I & II, & III

This is the capstone course in the Culinary Arts program of study intended to prepare students for careers such as banquet cook, catering assistant, event planning assistant, and many other entry-level food and beverage industry career paths. Course content reinforces the components of commercial kitchen safety and sanitation, food presentation, bakeshop preparation skills, sustainability practices, professionalism, and business opportunities. Upon completion of this course, proficient students will have applied the full range of knowledge and skills acquired in this program of study toward the planning and catering of an event approved by the instructor. Artifacts will be created for inclusion in a portfolio, which will continue throughout the full sequence of courses. In addition to implementing the following standards, the course should include a suggested 30 hours spent in a commercial kitchen laboratory.

Human Services Career Cluster

Industry Certifications in Human Services Available

- **TN Specific Industry Certification for Human and Social Sciences**

Dual Cosmetology I – Dual Cosmetology IV – The Cosmetology program at TCAT Crossville provides students with basic theory and clinical knowledge of the beauty industry through the use of approved textbooks, classroom instruction, and practical application with mannequins and live models. Dual enrollment credit will be earned, fees will apply.

Introduction to Human Services (Course 1 of 3) – Introduction to Human Studies is a foundational course for students interested in becoming a public advocate, social worker, dietician, nutritionist, counselor, or community volunteer. Upon completion of this course, a proficient student will have an understanding of human needs, overview of social services, career investigation, mental health, and communication. Artifacts will be created for inclusion in a portfolio, which will continue to build throughout the program of study.

Lifespan Development (Course 2 of 3)– builds basic knowledge in human growth and development. Upon completion of the course, proficient students will have knowledge of developmental theory, principles of growth, behavior of children from conception through adolescence, adult development and aging, and death and dying. Artifacts will be created for inclusion in a portfolio, which will continue to build throughout the program of study.

Family Studies (Course 3 of 3)– an applied knowledge course that examines the diversity and evolving structure of the modern family. Upon completion of the course, proficient students will have knowledge of the demographic, historical, and social changes of interpersonal relationships, as well as parenting, and the effect of stressors on the family. Artifacts will be created for inclusion in a portfolio, which will continue to build throughout the program of study.

Information Technology Career Cluster

EPSO: Industry Certifications in Information Technology Available

- **Comp TIA IT Fundamentals Certification**
- **Comp TIA A+ Certification**
- **Comp TIA Network+ Certification**
- **Comp TIA Security+ Certification**
- **CIW Web Design Specialist Certification**

Computer Science Foundations (Course 1)– Computer Science Foundations (CSF) is a course intended to provide students with exposure to various information technology occupations and pathways such as Networking Systems, Coding, Web Design, and Cybersecurity. As a result, students will complete all core standards, as well as standards in two of four focus areas. Upon completion of this course, proficient students will be able to describe various information technology (IT) occupations and professional organizations. Moreover, they will be able to demonstrate logical thought processes and discuss the social, legal, and ethical issues encountered in the IT profession. Upon completion of the CSF course, students will be prepared to make an informed decision about which Information Technology program of study to pursue.

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Coding I (Course 2)– Coding I is a course intended to teach students the basics of computer programming. The course places emphasis on practicing standard programming techniques and learning the logic tools and methods typically used by programmers to create simple computer applications. Upon completion of this course, proficient students will be able to solve problems by planning multi step procedures; write, analyze, review, and revise programs, converting detailed information from workflow charts and diagrams into coded instructions in a computer language; and will be able to troubleshoot/debug programs and software applications to correct malfunctions and ensure their proper execution.

Coding II (Course 3)– Coding II challenges students to develop advanced skills in problem analysis, construction of algorithms, and computer implementation of algorithms as they work on programming projects of increased complexity. In so doing, they develop key skills of discernment and judgment as they must choose from among many languages, development environments, and strategies for the program life cycle. Course content is reinforced through numerous short- and long-term programming projects, accomplished both individually and in small groups. These projects are meant to hone the discipline and logical thinking skills necessary to craft error-free syntax for the writing and testing of programs. Upon completion of this course, proficient students will demonstrate an understanding of object-oriented programming language using high-level languages such as FOCUS, Python, or SAS.

Dual Coding (Course 3 or 4)– Course content is reinforced through numerous short- and long-term programming projects, accomplished both individually and in small groups. These projects are meant to hone the discipline and logical thinking skills necessary to craft error-free syntax for the writing and testing of programs. Upon completion of this course, proficient students will demonstrate an understanding of object-oriented programming language using high-level languages such as FOCUS, Python, or SAS. This course will focus on the following: Problem solving and algorithm development; Organization and characteristics of modern digital computers with emphasis on developing good programming habits; Building abstractions with procedures and data, and programming in a modern computing language. Fees will apply.

AP Computer Science Principles (Course 4)– Learn the principles that underlie the science of computing and develop the thinking skills that computer scientists use. You'll work on your own and as part of a team to creatively address real-world issues using the tools and processes of computation. Students who score a 3 or above will earn college credit. Fees will apply.

Cybersecurity I (Course 2)– Cybersecurity I is a course intended to teach students the basic concepts of cybersecurity. The course places an emphasis on security integration, application of cybersecurity practices and devices, ethics, and best practices management. The fundamental skills in this course cover both in house and external threats to network security and design, how to enforce network level security policies, and how to safeguard an organization's information. Upon completion of this course, proficient students will demonstrate an understanding of cybersecurity concepts, identify fundamental principles of networking systems, understand network infrastructure and network security, and be able to demonstrate how to implement various aspects of security within a networking system.

Cybersecurity II (Course 3)– Cybersecurity II challenges students to develop advanced skills in concepts and terminology of cybersecurity. This course builds on previous concepts introduced in Cybersecurity I while expanding the content to include malware threats, cryptography, wireless technologies and organizational security. Upon completion of this course, proficient students will demonstrate an understanding of cybersecurity ethical decisions, malware threats, how to detect vulnerabilities, principles of cryptology, security techniques, contingency plan techniques, security analysis, risk management techniques, and advanced methods of cybersecurity.

Dual Cybersecurity (Course 3 or 4)– This course will focus on the following: Problem solving and algorithm development; Organization and characteristics of modern digital computers with emphasis on developing good programming habits; Building abstractions with procedures and data, and programming in a modern computing language. Upon completion of this course, proficient students will demonstrate an understanding of cybersecurity ethical decisions, malware threats, how to detect vulnerabilities, principles of cryptology, security techniques, contingency plan techniques, security analysis, risk management techniques, and advanced methods of cybersecurity. Fees will apply.

Computer Systems (Course 2)– Computer Systems is an intermediate course designed to prepare students with work-related skills and aligned certification in the information technology industry. Content provides students the opportunity to acquire knowledge in both theory and practical applications pertaining to hardware, operating systems, safe mode, command prompt, security, networking, printers, peripheral devices, laptops, mobile devices, troubleshooting, and customer service management. Upon completion of the course, proficient students will have acquired skills and knowledge to install, configure, and maintain computer systems. Students who are proficient in this course will be eligible to pursue the IT industry-standard credential, CompTIA's A+ certification.

Networking (Course 3)– Networking is an advanced course designed to emphasize the conceptual and practical skills necessary to design, manage, and diagnose network hardware and software. Upon completion of this course, proficient students will identify types of networks, understand the layers of the open systems interconnection (OSI) model, prevent security risks, and apply troubleshooting theory to the successful execution of networking tasks. Course content covers transmission control protocol, internet protocol, wired and wireless topologies, switching and routing, network hardware, wireless networking, and network operating systems (NOS). Upon completion of this course, proficient students will be prepared to sit for the CompTIA Network+ exam.

Dual Networking Systems (Course 3 or 4)– Course content covers transmission control protocol, internet protocol, wired and wireless topologies, switching and routing, network hardware, wireless networking, and network operating systems (NOS). This course is designed to give students a fundamental understanding of computer and network security. It will introduce students to a wide variety of concepts related to computer security. This course will cover the objectives for the CompTIA Security+ Certification. Fees will apply.

Web Design Foundations (Course 2)– Web Design Foundations is a course that prepares students with work-related web design skills for advancement into postsecondary education and industry. The course is intended to develop fundamental skills in both theory and practical application of the basic web design and development process, project management and teamwork, troubleshooting and problem solving, and interpersonal skill development. Laboratory facilities and experiences simulate those found in the web design and development industry; where interaction with a “client” is indicated in the standards, it is expected that students’ peers or the instructor may serve as mock clients in lieu of an actual relationship with an industry partner. Upon completion of this course, proficient students will be prepared for more advanced coursework in the Web Design program of study.

Website Development (Course 3)- Website Development builds on the skills and knowledge gained in Web Design Foundations to further prepare students for success in the web design and development fields. Emphasis is placed on applying the design process toward projects of increasing sophistication, culminating in the production of a functional, static website. As students work toward this goal, they acquire key skills in coding, project management, basic troubleshooting and validation, and content development and analysis. Artifacts of the work completed in this course will be logged in a student portfolio demonstrating mastery of skills and knowledge. Upon completion of this course, proficient students will be prepared to pursue a variety of postsecondary programs in the computer sciences, sit for industry certification, or apply their skills in a capstone Web Design Practicum.

Information Technology Cluster Courses are to be taken in the following order:

Coding

Computer Science Foundations
Coding I
Coding II
Dual Coding I
AP Computer Science Principles

Networking Systems

Computer Science Foundations
Computer Systems
Networking
Dual Networking Systems

Cybersecurity

Computer Science Foundations
Cybersecurity I
Cybersecurity II
Dual Cybersecurity I
AP Computer Science Principles

Web Design

Computer Science Foundations
Web Design Foundations
Website Development
AP Computer Science Principles

Law, Public Safety, Corrections & Security Career Cluster

Criminal Justice I (Course 1 of 4)- Criminal Justice I is the first course in Criminal Justice and Correctional Services program of study. It serves as a comprehensive survey of how the law enforcement, legal, and correctional systems interact with each other in the United States. Upon completion of this course, proficient students will understand the context of local, state, and federal laws, the concepts of crime control and the judicial process, and the importance of communications and professionalism in law enforcement.

Criminal Justice II (Course 2 of 4)- Criminal Justice II is the second course in the Criminal Justice and Correctional Services program of study. Upon completion of this course, proficient students will understand the impact of the Constitution on law enforcement, law enforcement and police procedures, alcohol and beverage laws, sentencing, and the importance of communications and professionalism in law enforcement.

Criminal Justice III (Course 3 of 4)- Criminal Justice III is the third course designed to equip students with the knowledge and skills to be successful in the sciences of criminal investigations. Students will learn terminology and investigation skills related to the crime scene, aspects of criminal behavior, and applications of scientific inquiry to solve crimes. By utilizing the scientific inquiry method, students will obtain and analyze evidence through simulated crime scenes and evaluation of

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case studies. Upon completion of this course, proficient students will be able to identify careers forensic science and criminology, summarize the laws that govern the application of forensic science, and draw key connections between the history of forensic science system and the modern legal system.

Criminal Justice Practicum (Course 4 of 4)– Criminal Justice Practicum is a capstone course in the Law Enforcement and Correction Services program of study that provides a practicum experience for students as they develop an understanding of professional and ethical issues. The capstone course will be based on the knowledge and skills from previous courses in the Law Enforcement and Correction Services program of study. Upon completion of the course, students will be proficient in components of communication, critical thinking, problem solving, information technology, ethical and legal responsibilities, leadership, and teamwork. Instruction may be delivered through school-based laboratory training or through work-based learning arrangements such as cooperative education, mentoring, and job shadowing.

Dual Criminal Justice (Course 3 of 4)– An overview of the American Police, including the philosophy and historical evolution behind the police force. Emphasis on policing procedures; crime prevention and control; functions of law enforcement; problems and needs facing the police; and contemporary issues. Fees may apply.

Marketing Career Cluster

Introduction to Business and Marketing (Course 1 of 3)– Introduction to Business and Marketing is an introductory course designed to give students an overview of the Business Management and Administration, Marketing, and Finance career clusters. The course helps students prepare for the growing complexities of the business world by examining basic principles of business, marketing, and finance in addition to exploring key aspects of leadership, ethical and social responsibilities, and careers. Students' academic skills in communications, mathematics, and economics are reinforced with activities modeled in the context of business topics. Upon completion of this course, proficient students will be equipped with the foundational skills to succeed in any of the Business, Marketing, or Finance programs of study and will be prepared to make an informed decision regarding which pathways they would like to pursue in high school.

Marketing & Management I (Course 2 of 3) – focuses on the study of marketing concepts and their practical applications. Students will examine the risks and challenges that marketers face to establish a competitive edge in the sale of products and services. Topics covered include foundational marketing functions such as promotion, distribution, and selling, as well as coverage of economics fundamentals, international marketing, and career development. Upon completion of this course, proficient students will understand the economic principles, the marketing mix, and product development and selling strategies.

Marketing & Management I (Course 3 of 3)– Marketing & Management II is a study of marketing concepts and principles used in management. Students will examine the challenges, responsibilities, and risks managers face in today's workplace. Subject matter includes finance, business ownership, risk management, marketing information systems, purchasing, promotion, and human resource skills.

STEM Career Cluster

EPSO: Industry Certifications in STEM available

- **Certified Solidworks Associate Academic Certification**

Principles of Engineering & Technology (Course 1 of 4)– Principles of Engineering and Technology is a foundational course in the STEM cluster for students interested in learning more about careers in engineering and technology. This course covers basic skills required for engineering and technology fields of study. Upon completion of this course, proficient students are able to identify and explain the steps in the engineering design process. They can evaluate an existing engineering design, use fundamental sketching and engineering drawing techniques, complete simple design projects using the engineering design process, and effectively communicate design solutions to others.

Engineering Design I (Course 2 of 4)– Engineering Design I is a fundamental course in the STEM cluster for students interested in developing their skills in preparation for careers in engineering and technology. The course covers essential knowledge, skills, and concepts required for postsecondary engineering and technology fields of study. Upon completion of this course, proficient students are able to describe various engineering disciplines, as well as admissions requirements for postsecondary engineering and engineering technology programs in Tennessee. They will also be able to identify simple and complex machines; calculate various ratios related to mechanisms; explain fundamental concepts related to energy; understand Ohm’s Law; follow the steps in the engineering design process to complete a team project; and effectively communicate design solutions to others.

Engineering Design II (Course 3 of 4)– Engineering Design II is an applied course in the STEM career cluster for students interested in further developing their skills as future engineers. This course covers the knowledge, skills, and concepts required for postsecondary engineering and technology fields of study. Upon completion of this course, proficient students are able to explain the differences between scientists and engineers, understand the importance of ethical practices in engineering and technology, identify components of control systems, describe the differences between laws related to fluid power systems, explain why material and mechanical properties are important to design, create simple free body diagrams, use measurement devices employed in engineering, conduct basic engineering economic analysis, follow the steps in the engineering design process to complete a team project, and effectively communicate design solutions to others.

Honors Engineering Practicum (Course 4 of 4)– Engineering Practicum is a capstone course intended to provide students with the opportunity to apply the skills and knowledge learned in previous Engineering courses within a professional working environment. In addition to developing an understanding of the professional and ethical issues encountered by engineers and technologists in the workplace, students learn to refine their skills in problem solving, research, communication, data analysis, teamwork, and project management. The course is highly customizable to meet local system needs: instruction may be delivered through school laboratory training or through work-based learning arrangements such as internships, cooperative education, service learning, mentoring, and job shadowing. Upon completion of the practicum, students will be prepared for postsecondary study in engineering and technology fields. Honors standards and expectations will apply.

Transportation Career Cluster

Industry Certifications in Transportation, Distribution, & Logistics Available

- OSHA 10
- Automotive Service Excellence Student Certification

Maintenance and Light Repair I (MLR I) (Course 1) – Maintenance and Light Repair I (MLR I) prepares students for entry into Maintenance and Light Repair II. Students explore career opportunities and requirements of a professional service technician. Content emphasizes beginning transportation service skills and workplace success skills. Students study safety, tools, equipment, shop operations, basic engine fundamentals, and basic technician skills. Upon completing all of the Maintenance and Light Repair courses, students may enter the automotive service industry as an ASE Certified MLR Technician.

Maintenance and Light Repair II (MLR II) (Course 2) – Maintenance and Light Repair II (MLR II) prepares students for entry into Maintenance and Light Repair III. Students study automotive general electrical systems, starting and charging systems, batteries, lighting, and electrical accessories. Upon completing all of the Maintenance and Light Repair courses, students may enter the automotive service industry as an ASE Certified MLR Technician.

Maintenance and Light Repair III (MLR III)/ Dual Maintenance and Light Repair I, II, & III– The Maintenance and Light Repair III (MLR III) course prepares students for entry into Maintenance and Light Repair IV. Students study and service suspension and steering systems and brake systems. Upon completing all of the Maintenance and Light Repair courses, students may enter the automotive service industry as an ASE Certified MLR Technician.

Dual Collision & Repair (4 Classes Offered) – Held at TCAT Crossville, The Collision Repair Technology is designed to introduce and train the student to analyze and estimate vehicles for repairing vehicles to pre accident condition. During the training students will learn how to operate hand tools, power tools, welders and shop equipment used in the collision trade. With this training; students will learn how to repair dents in sheet metal, repair composite materials, measure and pull frames, collision mechanical and refinish vehicles using spray equipment bringing the vehicle to pre-accident condition. Dual enrollment credit will be earned, fees will apply.

Introduction to Aerospace (Course 1) – Introduction to Aerospace is a comprehensive foundational course for students interested in pursuing careers in aviation. This course covers the basic principles governing flight and the regulation of flight that every aviation professional must know regardless of his or her occupation—as a pilot or an engineer, a salesperson or a specialist, a mechanic or a statistician. In addition to acquiring foundational knowledge of safety procedures and industry regulations, students will also gain essential understanding of aircraft structures, the flight environment, basic procedures, and navigation. Upon completion of this course, proficient students will be prepared for further study in advanced Aviation Flight and/or Aviation Maintenance courses.

Aviation I: Principles of Flight (Course 2) – Aviation I: Principles of Flight builds on the fundamental knowledge and skills learned in Introduction to Aerospace while teaching students the essential competencies needed for flight under normal conditions. Upon completion of this course, proficient students will be able to apply knowledge, skills, and procedures in a variety of simulated flight environments. Moreover, students who complete this course will have the opportunity to move on to advanced study in Aviation II: Advanced Flight, where they will continue to prepare for the FAA Private Pilot written exam.

Aviation II: Advanced Flight (Course 3)– Aviation II: Advanced Flight is the capstone course in the Aviation Flight program of study intended to prepare students for careers in aviation. While continuing to build upon the knowledge, skills, and competencies acquired in Introduction to Aerospace and Aviation I, students in Aviation II will receive rigorous instruction in preparation to take the Federal Aviation Administration (FAA) Private Pilot written exam. This course goes beyond the mastery of procedures under normal conditions learned in Aviation I: Principles of Flight and introduces students to the troubleshooting and diagnostic techniques used by pilots and other aircraft personnel to assess and correct for malfunctions, make adjustments in hazardous weather conditions, and perform other crucial emergency procedures. Continued emphasis is placed on maintaining the safety of flight and developing sound judgment (“judgment training”) throughout these conditions.

Unmanned Aircraft Systems Pilot (Course 4) – Unmanned Aircraft Systems Pilot is a course intended to prepare students for positions as commercial drone pilots for small Unmanned Aircraft Systems (sUAS). The course teaches students the knowledge and skills needed to successfully pilot sUAS (less than 55 lbs.). Students in Unmanned Aircraft Systems Pilot will receive rigorous instruction in preparation to take the Federal Aviation Administration (FAA) Remote Pilot Certification (Part 107) written exam also called the aeronautical knowledge exam. The course places an emphasis on applicable regulations, operating requirements, weather impacts, charts, aeronautical decision-making, and safety.

Transportation Cluster Courses are to be taken in the following order:

Automotive Maintenance & Light Repair

Maintenance & Light Repair I
Maintenance & Light Repair II
Maintenance & Light Repair III
Dual Maintenance & Light Repair I
Dual Maintenance & Light Repair II

Aviation & Flight

Introduction to Aerospace
Aviation I: Principles of Flight
Aviation II: Advanced Flight
Unmanned Aircraft System Pilot

Work-Based Learning– Available in All Career Clusters

Work-Based Learning (WBL)– Work-based learning (WBL) is a proactive approach to bridging the gap between high school and high-demand, high-skill careers in Tennessee. Students build on classroom-based instruction to develop employability skills that prepare them for success in postsecondary education and future careers. Through experiences like internships, apprenticeships, and paid work experience, juniors and seniors (16 years or older) may earn high school credit for capstone WBL experiences. WBL coordinators are educators who are trained and certified by the department to coordinate these WBL experiences for students.