

# Wyoming County Schools



*Secondary Schools*

*Course Descriptions*



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# *HIGH SCHOOL COURSES*

## English/Language Arts

The adolescent education program of study maintains an integrated approach to the English Language Arts. Through literature study, the refinement of research skills and an emphasis on mastering the conventions of Standard English, the learner grows in English Language Arts competency. To promote life-long learning, the student gains refined media/technology skills, work-related literacy skills, and clearer understanding of the interrelationships of these areas to the English Language Arts. All students must be provided the opportunity to select honors and/or advanced placement courses to fulfill the four units of English Language Arts credit currently required for graduation.

### **Grade 9**

#### **400900 English 9**

English Language Arts 9 is a ninth grade course that will focus on the effective use of written language in educational and occupational endeavors and interpersonal communication. Instructional delivery will be enhanced by computer technology. Frequent interaction with a broad array of quality literature and informational text will encourage an appreciation for the power of the spoken and written word. Students will apply skills in language, mechanics, spelling and sentence structure. All reading, writing, speaking, listening, and media literacy skills and strategies will be utilized across the curriculum.

#### **40090H English 9 Honors**

English 9 Honors is a ninth grade course where students will focus on the effective use of written language in educational and occupational endeavors and interpersonal communications. Instructional delivery will be enhanced through a wide range of information media and the interpretation of media communications. Frequent interaction with a broad array of quality literature and informational texts will encourage an appreciation for the power of the written and spoken word. All reading, writing, speaking, listening, and media skills and strategies will be utilized across the curriculum. In addition to English requirements, students will be introduced to extended readings in literature and in other fields of knowledge. Techniques of inquiry develop higher-level thinking skills. Writing assessments emphasize the relationship between critical thinking and writing, as students prepare to meet the challenge of college composition.

*Prerequisite: Criteria for Placement in Honors or Advanced Courses*

### **Grade 10**

#### **401000 English 10**

English Language Arts 10 is a tenth grade course with emphasis on the use of written language for educational, occupational, and personal endeavors. Preparation will include critiquing and evaluating oral presentations and using speaking and listening while reading and writing. Instructional delivery will be enhanced by computer technology. Instructional delivery will be enhanced by a wide variety of media. Frequent interaction with a broadened array of literature will encourage an increased appreciation for the power of the spoken and written word across the

curriculum. Students will apply skills in language, mechanics, spelling and sentence structure. Sophomores will become adept at making connections and transferring knowledge to new situations through research and writing.

### **40100H English 10 Honors**

English 10 Honors students will use written language for educational, occupational, and self-direction endeavors. Preparation will include critiquing and evaluating oral presentations and using listening, speaking, and media literacy. Instructional delivery will be enhanced by a wide variety of media. Frequent interaction with a broadened array of literature will encourage an increased appreciation and understanding for the power of the spoken and written word across the curriculum. Sophomores will become more adept at making connections and transferring knowledge to new situations through research and writing. In addition to English requirements, students will be introduced to extended readings in literature and in other fields of knowledge. Techniques of inquiry develop higher-level thinking skills. Writing assessments emphasize the relationship between critical thinking and writing, as students prepare to meet the challenges of college composition.

*Prerequisite: Criteria for Placement in Honors or Advanced Courses*

## **Grade 11**

### **401100 English 11**

English Language Arts 11 is an eleventh grade course emphasizing fundamental, literary and communication skills that are refined and enhanced. English Language Arts 11 represents more challenging academic rigor and depth. In addition, career formalization, including college entrance exam preparation and workplace readiness skills, becomes a primary focus. Student proficiency will be diagnosed to determine instructional priorities. As the need for challenging research skills becomes more vital, the incorporation of technology will be emphasized. The inclusion of higher order thinking skills, communication skills, self-direction and creative thinking in the curriculum will be used to enable students to effectively build content knowledge.

### **40410A AP English Language and Composition** (*Weighted*)

In addition to the goals of English 11, this course includes the goals of the College Board's Advanced Placement Program. The AP English Language and Composition course aligns to an introductory college-level rhetoric and writing curriculum, which requires students to develop evidence-based analytic and argumentative essays that proceed through several stages or drafts. Students evaluate, synthesize, and cite research to support their arguments. Throughout the course, students develop a personal style by making appropriate grammatical choices. Both the student's reading and writing should make them aware of the interaction between authorial purpose, audience needs, the subject itself, generic conventions, and the resources of language: syntax, word choice, and tone. Additionally, students read and analyze the rhetorical elements and their effects in non-fiction texts, including graphic images as forms of text, from many disciplines and historical periods. A summer reading assignment may be required.

*Prerequisite: Criteria for Placement in Honors or Advanced Courses*

## **Grade 12**

### **401200 English 12**

English Language Arts 12 is a senior course that focuses on readiness for the workplace and an evaluation, analysis, and appreciation of language and literature in spoken and written form. Students will also focus and polish personal skills and goals. In addition, students will have an opportunity to complete a research paper and tie their senior project into this course. Readiness

for the work place, thinking creativity and logically to solve problems, and using tools that are essential to workplace productivity will be emphasized. Instructional delivery will be enhanced through a wide range of media.

**40420A AP English Literature and Composition** (*Weighted*)

In addition to the goals of English 12, this course includes the goals of the College Board's Advanced Placement Program. The AP English Literature and Composition course aligns to an introductory college-level literary analysis course. The course engages students in the close reading and critical analysis of imaginative literature to deepen their understanding of the ways writers use language to provide both meaning and pleasure. As they read, students consider a work's structure, style, and themes, as well as its use of figurative language, imagery, symbolism, and tone. Though such study, students sharpen their awareness of language and their understanding of the writer's craft. Writing assignments include expository, analytical, and argumentative essays that require students to analyze and interpret literary works. A summer reading assignment may be required.

*Prerequisite: Criteria for Placement in Honors or Advanced Courses*

**401400 English 12 CR** (Grade 12 students only)

English 12 CR (College/Career Ready) is a rigorous course designed for students within approximately 4-5 points of the acceptance score for college admission into a credit-bearing entry level English course. Engagement in this rigorous course of study will assist those identified students in attaining acceptable admissions score for entrance into the credit-bearing freshman English course.

**40120X College English 101** (*Dual/Weighted*)

This course is offered through Marshall University and taught by an approved high school instructor. Successful completion results in dual credit with Wyoming County Schools and the West Virginia college system. Instructional goals for English 12 are achieved if College English 101 and 201 are completed successfully.

*Prerequisite: Criteria for Placement in Honors or Advanced Courses*

**40120X College English 201** (*Dual/Weighted*)

This course is offered through Marshall University and taught by an approved high school instructor and successful completion results in dual credit with Wyoming County Schools and the West Virginia college system. Instructional goals for English 12 are achieved if College English 101 and 201 are completed successfully.

*Prerequisite: Criteria for Placement in Honors or Advanced Courses*

**401300 Transition English Language Arts for Seniors** (Grade 12 students only)

Seniors are assigned to this course if they have not met the college and career readiness benchmark as determined by the State General Summative Assessment. The purpose of the course is to help students develop the skills necessary for success in credit bearing postsecondary courses and/or the workplace. This course will solidify reading, writing and speaking/listening skills as they interact with texts of varying complexity.

**ELA Electives**

**402200 Creative Writing**

Creative writing courses emphasize prose and poetic forms of writing that express the writer's thoughts and feelings. Metaphorical language and relational thought are evident in the writing. Writings are based more on fiction than factual and logical progression of ideas. This course is designed for students interested in developing specialized skills in written expression. Creative

writing consists of four major units: descriptive and narrative writing, short story, poetry, and drama. Students are required to keep a journal of their original works. Essentials of good composition (content, form, style, mechanics, and usage) are stressed on all assignments.

#### 405100 **Journalism**

This course provides an overview of the history of American media and the functions of a journalist and the media. Students learn important techniques of writing, story organization, and newspaper styles.

#### 406100 **Journalism Video**

Broadcast journalism is a basic course in television and radio production which includes equipment orientation and operation, studio configuration, sound and video basics, technical writing, and sound and video production skills.

#### 407100 **School Yearbook**

Students in this class will be members of the yearbook production staff. The course is designed to expose the student to the skills of photography, journalism and page production, and the responsibilities needed to meet the demands of a production schedule and a publication deadline.

#### 407200 **School Yearbook II**

Students in this class will be members of the yearbook production staff. The course is designed to enhance a student's skills in photography, journalism, and page production. Students will have increased responsibilities to meet the demands of a production schedule and a publication deadline.

#### 407600 **Speech/Oral Communications**

Students in this class will be enabled, through practice, to develop communication skills for a variety of speaking situations (such as small and large group discussions, delivery of lectures or speeches in front of audiences, etc.) Course topics may include, but not limited to, research and organization, writing for verbal delivery, stylistic choices, visual and presentation skills, analysis and critique, and development of self-confidence.

## Mathematics

West Virginia's College- and Career-Readiness Standards for Mathematics are the culmination of an extended, broad-based effort to help ensure that all students are college- and career-ready upon completion of high school. The skills contained in the mathematics standards are essential for college- and career-readiness in a twenty-first century, globally competitive society. The standards reflect a progression and key ideas determining how knowledge is organized and generated within the content area. Standards evolve from specifics to deeper structures inherent in the discipline. These deeper structures serve to connect the specifics. The standards follow such a design, stressing conceptual understanding of key ideas and continually returning to organizing principles such as place value or the properties of operations to structure those ideas. The sequence of topics and performances outlined in mathematics standards must respect the scientific research about how students learn and what is known about how their mathematical knowledge, skill, and understanding develop over time. Classroom instruction will integrate content standards with mathematical habits of mind. Mathematical habits of mind, which should be integrated in these content areas, include: making sense of problems and persevering

in solving them, reasoning abstractly and quantitatively; constructing viable arguments and critiquing the reasoning of others; modeling with mathematics; using appropriate tools strategically; attending to precision, looking for and making use of structure; and looking for and expressing regularity in repeated reasoning. Students will continue developing mathematical proficiency in a developmentally-appropriate progressions of standards. **All students must complete a minimum of four courses in mathematics to graduate (Algebra I, Geometry, Algebra II, and a fourth option). All students must take a math course each year.**

## **Grade 9**

### **302100 Algebra I**

Students in this course will focus on five critical units that deepen and extend understanding of linear and exponential relationships by contrasting them with each other and by applying linear models to data that exhibit a linear trend, and students engage in methods for analyzing, solving, and using quadratic functions.

*Prerequisite: Criteria for Placement in Algebra I*

### **302400 Algebra I Support**

The goal of this course is to provide foundational knowledge and intervention for students taking Algebra I. This course is provided to students as a second course to support the core Algebra I course. The course is designed to enhance the student's knowledge of prerequisite skills and academic language that are needed to access Algebra I and beyond.

### **30210H Algebra I Honors**

Students in this course will focus on five critical units that deepen and extend understanding of linear and exponential relationships by contrasting them with each other and by applying linear models to data that exhibit a linear trend, and students engage in methods for analyzing, solving, and using quadratic functions. In addition to Algebra I requirements, students will be introduced to extended problem solving experiences and applications to STEM fields.

*Prerequisite: Criteria for Placement in Honors or Advanced Courses*

## **Grade 10**

### **304500 Geometry**

Students in this course will explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. Important differences exist between this Geometry course and the historical approach taken in Geometry classes. For example, transformations are emphasized early in this course.

### **30450H Geometry Honors**

Students in this course will explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. Important differences exist between this Geometry course and the historical approach taken in Geometry classes. For example, transformations are emphasized early in this course. In addition to Geometry requirements, students will be introduced to extended problem solving experiences and applications to STEM fields.

*Prerequisites: Criteria for Placement in Honors or Advanced Courses*

## **Grade 11**

### **304100 Algebra II**

Students in this course will build on their work with linear, quadratic, and exponential functions and extend their repertoire of functions to include polynomial, rational, and radical functions. (In this course rational functions are limited to those whose numerators are of degree at most 1 and denominators of degree of most 2; radical functions are limited to square roots or cube roots of at most quadratic polynomials.) Students will work closely with the expressions that define the functions, and continue to expand and hone their abilities to model situations and to solve equations, equations using the properties of logarithms.

### **302700 Financial Algebra**

Students in this course will focus on financial applications designed to deepen and extend understandings of mathematics. Students in Financial Algebra/Mathematics will communicate effectively, using accurate mathematical language in a financial context. Students will interpret and analyze various functions, graphs, and data in order to make responsible and wise financial decisions in the context of their personal lives regarding banking services, automobile purchases and maintenance decisions, income tax and employee benefits, and business decisions.

## **Grade 12**

### **305200 Transition Mathematics for Seniors** (Grade 12 students only)

All students who do not achieve the State assessment college readiness benchmarks for mathematics are required to take this college transition mathematics course during their senior year. The course will solidify their quantitative literacy by enhancing numeracy and problem solving skills as they investigate and use the fundamental concepts of algebra, geometry, and introductory trigonometry.

## **Other Mathematics Courses** (*Grades 11 and 12*)

### **302500 Advanced Mathematical Modeling**

This course includes the analysis of information using statistical methods and probability, modeling change and mathematical relationships, mathematical decision making in finance, and spatial and geometric modeling for decision-making.

### **30310A AP Calculus AB** (*Weighted*)

AP Calculus AB is primarily concerned with developing the students' understanding of the concepts of calculus and providing experience with its methods and applications. The courses emphasize a multi-representational approach to calculus, with concepts, results, and problems being expressed graphically, numerically, analytically, and verbally. The connections among these representations also are important.

*Prerequisite: Criteria for Placement in Honors or Advanced Courses*

### **30260X College Algebra—MTH 127** (*Dual/Weighted*)

*Course is taught dual with STEM Readiness Math.*

This course is offered through Marshall University and taught by an approved high school instructor. The course is a review of the main techniques of algebra. Topics covered include polynomial, rational, exponential, and logarithmic functions along with graphs, equations and inequalities, and sequences.

*Prerequisite: ACT Math 19 or SAT Math 500 or C or better in MTH 099 or MTH 102.*

*Prerequisite: Criteria for Placement in Honors or Advanced Courses*



30480X **Plane Trigonometry—MTH 122** *(Dual/Weighted)*

*Course is taught dual with Trigonometry/Pre-Calc.*

This course is offered through Marshall University and taught by an approved high school instructor. The course is a study of the trigonometric functions, graphs of the trigonometric functions, identities, equations, inverse trigonometric functions, vectors, complex numbers, and applications.

*Prerequisite: ACT Math 22 or SAT Math 520 or grade of C or better in MTH 127 or MTH 130.*

*Prerequisite: Criteria for Placement in Honors or Advanced Courses*

304700 **Probability and Statistics** *(Weighted)*

Probability and statistics are sections of mathematics that deal with data collection and analysis. Probability is the study of chance and is a very fundamental subject that we apply in everyday living, while statistics is more concerned with how we handle data using different analysis techniques and collection methods. **Elective Credit Only!**

*Prerequisite: Criteria for Placement in Honors or Advanced Courses*

302600 **STEM Readiness Mathematics** *(Weighted)*

This course is designed for students who have completed the Math III (LA) course and have decided they are interested in pursuing a STEM career. It includes standards that would have been covered in the Math III (STEM) course.

*Prerequisite: Criteria for Placement in Honors or Advanced Courses*

304800 **Trigonometry/Pre-Calculus** *(Weighted)*

Students in this course will generalize and abstract learning accumulated through previous course as the final springboard to calculus. Students will take an extensive look at the relationships among complex numbers, vectors, and matrices. They will build on their understanding of functions, analyze rational functions using an intuitive approach to limits and synthesize functions and their inverses and complete the study of the conic sections.

*Prerequisite: Criteria for Placement in Honors or Advanced Courses*

## Science

Science is the study of the structure and processes of the physical and natural world through observations and experiments. By its very nature, science embodies the doing of science and engineering practices which builds and organizes knowledge in the form of testable explanations, predictions about the universe, and technological applications. The science policy describes students engaging in those practices as they acquire science knowledge and skills necessary for the furtherance of their education, careers, and general welfare. Achievement in reading, writing, and reasoning in science will accelerate students' progress in all subjects. Engineering, technology, and the application of science objectives are integrated throughout instruction as students define problems and design solutions related to the course objectives. There is a focus on several scientific practices which include developing and using models, planning and conducting investigations, analyzing and interpreting data, using mathematical and computational thinking, constructing explanations and designing solutions. Students will engage in active inquiries, investigations, and hands-on activities as they develop and demonstrate conceptual understandings and research and laboratory skills described in the objectives. Safety instruction is integrated in all activities, and students will implement safe procedures and practices when manipulating equipment, materials, organisms, and models.

## **Grade 9**

### **620100 Earth & Space Science**

This course builds upon concepts from middle school science concepts by revealing the complexity of Earth's interacting systems, evaluating and using current data to explain Earth's place in the universe and enable students to relate Earth Science to many aspects of human society.

Disciplinary core ideas, science and engineering practices, and crosscutting concepts are intertwined as students focus on five ESS content topics: Space Systems, History of Earth, Earth's Systems, Weather and Climate, and Human Sustainability.

### **62010H Earth & Space Science Honors**

This honors course builds upon concepts from middle school science concepts by revealing the complexity of Earth's interacting systems, evaluating and using current data to explain Earth's place in the universe and enable students to relate Earth Science to many aspects of human society. Disciplinary core ideas, science and engineering practices, and crosscutting concepts are intertwined as students focus on five ESS content topics: Space Systems, History of Earth, Earth's Systems, Weather and Climate, and Human Sustainability. In addition to requirements of Earth & Space Science, students will be exposed to extended problem solving exercises and applications in STEM careers.

## **Grade 10**

### **602100 Biology**

The tenth grade Biology content provides more in-depth studies of the living world and enables students to make sense of emerging research findings and apply those understandings to solve problems. Areas of study include topics pertaining to cell structure and function, energy flow, homeostasis, taxonomy, plant structure and function, animal structure and function, genetics and ecology. Laboratory work is emphasized.

### **60210H Biology Honors**

The tenth grade Biology Honors content provides more in-depth studies of the living world and enables students to make sense of emerging research findings and apply those understandings to solve problems. Areas of study include topics pertaining to cell structure and function, energy flow, homeostasis, taxonomy, plant structure and function, animal structure and function, genetics and ecology. Laboratory work is emphasized. In addition to Biology requirements, students will be introduced to extended exploration of the living world and applications in STEM fields.

*Prerequisite: Criteria for Placement in Honors or Advanced Courses*

## **Other Science Courses (Grades 11 and 12)**

### **61210A AP Biology (Weighted)**

The exploration of "just what is life" is an exciting and rigorous study. This course has the goal of preparing students to pass the national AP Biology exam. Topics include sexual reproduction, embryonic development, mechanisms of evolution, gene technology, simple animals, animal body systems, and animal behavior.

*Prerequisite: Criteria for Placement in Honors or Advanced Courses*

63210A **AP Chemistry** (*Weighted*)

College level course with instruction designed to prepare for the AP Chemistry exam and receive college credit. Topics include an in-depth examination of the structure and states of matter, reaction stoichiometry, equilibrium, kinetics, thermodynamics, descriptive chemistry, nuclear chemistry, electrochemistry and an introduction to organic chemistry.

*Prerequisite: Criteria for Placement in Honors or Advanced Courses*

62210A **AP Environmental Science** (*Weighted*)

College level course with instruction designed to prepare for the AP Environmental Science exam and receive college credit. This course is designed to provide students with scientific principles, concepts, and methodologies necessary to comprehend the relationships abundant within the natural world, to identify and analyze environmental problems, to evaluate relative risks associated with these identified problems, and to examine alternative solutions for resolving and/or preventing similar problems facing the global environment.

603100 **Chemistry** (recommended third course STEM option)

This course is an advanced elective course designed for students pursuing STEM (Science/Technology/Engineering/Mathematics) education and careers. Students will develop a deeper understanding of the core concepts of: Structures and Properties of Matter and Chemical Reactions as they prepare for college chemistry requiring a strong mathematical foundation. Topics include matter, atomic theory, stoichiometry, kinetic theory, gas laws, solution reactions, and introductory thermodynamics. Course is strongly recommended for college-bound students.

631200 **Environmental Science**

This course is an advanced high school elective course which builds on foundational knowledge of geology, biology, chemistry, physics, meteorology, and ecology, as well as economics, politics and social considerations. Students develop an understanding of how humans are affected by the environment. As students fuse experiences across disciplines, they will acquire knowledge, values, and skills needed to protect and improve the environment.

604400 **Forensic Science**

This course is an advanced, high school elective course designed to provide students with hands-on experiences in various aspects of criminal investigation. Science content is integrated as students ask questions, define problems, develop and use models, plan and conduct investigations, analyze and interpret data, construct explanations and design solutions as they consider crime scenes, evidence and protocol. Students will have the opportunity to develop proficiency in evidence collection, maintenance of data integrity, formulation of a conclusion/summary, and succinct communication of findings.

610300 **Human Anatomy and Physiology**

This is an advanced course for college-bound students wanting a deeper understanding of the structures and functions of the human body. Instruction will be at both micro and macro levels reviewing cellular functions, biochemical processes, tissue interactions, organ systems and the interaction of those systems as it relates to the human organism. Systems covered include integumentary, skeletal, muscular, respiratory, circulatory, digestive, excretory, reproductive immunological, nervous, and endocrine. Recommended for students interested in health or medical related fields with emphasis on basic anatomy and physiology of the human body.

**601100 Physical Science** (recommended third course option)

This course concentrates on the development of foundational knowledge in biology, chemistry, physics, earth/environmental science and astronomy. Through a spiraling, inquiry-based program of study, students will demonstrate scientific literacy and the use of 21<sup>st</sup> Century Skills across these major fields of science. Subject matter is delivered through a coordinated, integrated approach with an emphasis on the development of the major science themes of systems, changes, and models. Students will engage in active inquiries, investigations, and hands-on activities for a minimum of fifty percent of the instructional time to develop conceptual understanding and research/laboratory skills.

**604100 Physics** (recommended fourth course STEM option) (*Weighted*)

This course is an advanced elective course designed for students pursuing STEM (Science/Technology/Engineering/Math) education and careers. The course emphasizes a mathematical approach to the topics of Forces and Interactions; Energy, and Waves and Electromagnetic Radiation and prepares a student for college physics. Topics include investigations into Newtonian physics, projectile and centripetal motion, gravitation, and momentum. This course is strongly recommended for students preparing for college.

*Prerequisite: Criteria for Placement in Honors or Advanced Courses*

## Social Studies

High school students will advance through a selection of courses to become more prepared for the challenges of college and career along with a third critical element preparation for civic life. The High School Social Studies course sequence may be prescribed at the county level. Civics and Contemporary Studies must have one of the U.S. Studies courses as a prerequisite.

### **Grade 9**

**701000 World Studies**

Students are engaged in the study of the development and evolution of the historic, economic, geographic, political, and social structures of the cultural regions of the world from the dawn of civilization to the 20<sup>th</sup> Century. Special attention is given to the formation and evolution of societies into complex political and economic systems. This course is a survey of various world cultures. Students will examine the distinguishing and unique features (religious, economics, political, historic) and major contributions from significant cultures. Independent study and research will culminate with oral presentations to appropriate audiences.

**70100H World Studies Honors**

This study of the world emphasizes the historic, economic, geographic, political, and social structure of various cultural regions of the world from the dawn of civilization to the interdependent world of the twentieth century. Special attention is given to the formation and evolution of societies into complex political and economic systems. Geography/map skills and critical thinking skills are emphasized. Independent study and research will culminate with oral presentations to appropriate audiences. In addition to requirements of World Studies, students will be exposed to more extensive readings, research, and presentations.

*Prerequisite: Criteria for Placement in Honors or Advanced Courses*

## **Grade 10**

### **700900 U.S. Studies**

This course follows the evolution of the Constitution as a living document and the role of participatory democracy in the development of a rapidly changing technological society. This study of the United States is an examination of the formative years from the colonization of what would be the United States to its transformation as a dominant political and economic influence in the world at the beginning of the 20<sup>th</sup> century. Special emphasis is placed on how the challenges of settling expansive and widely-differing environments were met by a diverse population.

### **70090H U.S. Studies Honors**

This course follows the evolution of the Constitution as a living document and the role of participatory democracy in the development of a rapidly changing technological society. This study of the United States is an examination of the formative years from the colonization of what would be the United States to its transformation as a dominant political and economic influence in the world at the beginning of the 20<sup>th</sup> century. Special emphasis is placed on how the challenges of settling expansive and widely-differing environments were met by a diverse population. Students will read biographies, novels and primary documents to supplement the basal text. An in-depth analysis of the Constitution and the formation of the federal system is included. Emphasis will be placed on the use of American experiences to help students develop critical thinking, study skills, oral and written communication and understand past experiences on future decision making.

*Prerequisite: Criteria for Placement in Honors or Advanced Courses*

## **Grade 11**

### **701100 Contemporary Studies**

This course examines the interactions between the United States and the world from 1914 to present day. Students will be engaged in critical thinking and problem-solving skills as they learn and work with factual historical content, geography, civics, economics, and other social studies concepts. Maps, spreadsheets, charts, photographs, the arts, music, graphs, primary source documents, textbooks, and data from a variety of credible electronic and non-electronic sources will be used to synthesize, analyze, interpret, and predict outcomes. The concept of globalization is explored and evaluated through the careful analysis of the interactions (between and among) the United States and other countries. Students will examine factors that influence changing political and economic relationships and foreign policies between the United States and its world neighbors. The impact of world events on the individual citizen and the reciprocal impact of an individual citizen's actions, in the democratic process, on the world events will be emphasized.

*According to WV Policy 2510, best practice encourages students who take United States Studies to take Contemporary Studies as their next course of study.*

## **Grade 12**

### **70440A AP U.S. Government & Politics**

AP American Government is an elective course of study that will provide students with an understanding of government from its founding to the present. Students will explore public policy and opinion as well as gain a background in how the United States government impacts the world community. Course completion and success on an AP exam earns college credit. Outside readings and a summer project will be required. This course replaces Civics for Next Generation requirement for seniors.

*Prerequisite: Criteria for Placement in Honors or Advanced Courses*

### 703100 **Civics**

This course in government will help students understand the workings of their local, state and national governments and other political systems. Students will develop a basis for understanding the rights and responsibilities of citizens in American constitutional democracy and a framework for competent and responsible participation. Through examination and explication of the rule of law and the growing need for security, juxtaposed against citizens' guarantees for individual liberties, students will develop the skills and understanding necessary to evaluate and determine strategies for articulating and resolving conflicts between the two.

### **Other Social Studies Courses**

#### 703200 **Economics**

Understanding economics is essential for all students to enable them to reason logically about key economic issues that affect their lives as workers, consumers, and citizens. A better understanding of economics enables students to understand the forces that affect them every day and helps them identify and evaluate the consequences of personal decisions. An understanding of economic concepts, facts, events, observations, and issues will help the student make more effective decisions about economic issues.

#### 703300 **Geography**

Geography provides knowledge of the Earth's physical and human systems and of the interdependency of living things and physical environments. This course is based on the six essential elements of geography and stresses the contemporary world and the role of the U.S. in the global community. Students will use geographic perspectives and technology to interpret culture, environment, and the connection between them. Students will use the geographic skills of questioning, acquiring, organizing, and analyzing geographic information.

#### 70330X **College Geography 100** *(Grades 11-12) (Dual/Weighted) Course is taught dual with Geography.*

This critical thinking course provides a systemic survey of contemporary concepts and processes of human geography in global perspective, including economics, geopolitics, culture, nationalism, urbanization, governance, agriculture, population, and migration.

Prerequisite: Criteria for Placement in Honors or Advanced Courses

#### 764100 **Intro to Majors** (Grade 9-10)

Intro to Majors course that allow them to access career information, explore a career cluster area of their choice and demonstrate career and academic planning and decision making skills with reference to their selected career major and educational pathway. Resume writing, financial planning, interviewing, presenting information orally and other career/technological skills are emphasized. The student's career/educational portfolio is further developed throughout the course.

#### 732100 **Psychology**

Psychology is defined as the scientific study of the mind and behavior. It is the study of the nature and functions of the mind, personality and human behavior. Students are introduced to the scientific method and the core ideas and theories of psychology. Students will gain an understanding of the complexities and diversity of human thought and behavior.

73210X **College Psychology** (Grades 11-12) (*DualWeighted*)

*Course is taught dual with Psychology.*

This is a three-hour survey of psychology taught by a high school instructor. Psychology is the study of the nature and functions of the mind, personality and human behavior. Completion of a class group project, written reports, and participation in a debate or presentation is expected.

Prerequisite: Criteria for Placement in Honors or Advanced Courses

704700 **AP Psychology** (Grades 11-12) (*Weighted*)

The AP Psychology course is designed to provide students with a learning experience equivalent to that of an introductory college course in psychology. This course will introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals in context. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. Students will also learn about the ethics and methods psychologists use in their science and practice.

Prerequisite: Criteria for Placement in Honors or Advanced Courses

734100 **Sociology**

Sociology is the study of our society and our relationship to it. This course will teach a comprehensive examination of the basic concepts, principles and methods central to the scientific study of sociology. Sociology is the systematic study of relationships among people, the assumption being that behavior is influenced by social, political, occupational and intellectual groupings and by the particular settings in which individuals find themselves. This course offers a distinctive look at the social world and our place in it. Students will study human interaction and development with emphasis placed on social institutions as well as culture, ethnic, racial, and minority groups.

70460A **AP United States History**

The purpose of the AP program in American History is to provide students with the analytic skills and factual knowledge necessary to deal critically with American History. The program prepares students for intermediate and advanced college courses by making demands upon them equivalent to those of a full-year introductory college course. Students should learn to assess historical materials and to weigh the evidence and interpretations presented in historical scholarship. AP American History is designed to develop the skills necessary to arrive at conclusions on the basis of an informed judgment and to present reasons and evidence clearly and persuasively in essay format. Outside readings will be required. This course will provide replacement credit for Contemporary Studies.

Prerequisite: Criteria for Placement in Honors or Advanced Courses

704800 **AP World History**

The purpose of the AP World History course is to develop greater understanding of the evolution of global processes and contacts, in interaction with different types of human societies. This understanding is advanced through a combination of selective factual knowledge and appropriate analytical skills. The course highlights the nature of changes in international frameworks and their causes and consequences, as well as comparisons among major societies, relevant factual knowledge deployed in conjunction with leading interpretive issues and types of historical evidence, and an understanding of cultural, institutional, and technological precedents that, along with geography, set the human stage.

Prerequisite: Criteria for Placement in Honors or Advanced Courses

# Fine and Performing Arts

## 36510A **AP Music Theory**

This course introduces the student to musicianship, theory, musical materials, and procedures. One aspect of music, such as harmony, may be emphasized. However, it integrates melody, harmony, texture, rhythm, form, musical analysis, elementary composition and, to some extent, history and style. Musicianship skills such as dictation and other listening skills, sight-singing, and keyboard harmony are considered an important part of the theory course. The ultimate goal of AP Music Theory is to develop a student's ability to recognize, understand, and describe the basic materials and processes of music that are heard or presented in a score.

*Recommendation: Since the student's ability to read and write musical notation is fundamental to the course, it is strongly recommended that the student has at least basic performance skills in voice or on an instrument.*

## 321100 **Art I**

Art I is a combination of both foundations and studio art, and is designed to reinforce the knowledge and skills developed by the K-8 Content Standards and Objectives. Students produce two-and-three-dimensional artworks using a variety of media, techniques, technology and processes. They relate art skills to critical thinking, culture, history and other disciplines. They practice responsible workplace skills and review art career options. Students have the opportunity to participate in the Wyoming County Schools' Art Exhibition as well as other prescribed art exhibitions/competitions at local, regional, and state levels.

## 321200 **Art II**

Art II extends the student's artistic, critical, and conceptual skills through experiences in creating, reflecting and discussing artworks. Students focus on compositional awareness through the proficient use of the elements, principles, structures, and functions of design. Students explore various aspects of the arts in the context of global cultures and historical parameters as they examine connections between other disciplines and technologies. Students practice responsible workplace skills and safety. They explore career opportunities. Students also begin portfolio development. Students have the opportunity to participate in the Wyoming County Schools' Art Exhibition as well as other prescribed art exhibitions/competitions at local, regional, and state levels.

*Prerequisite: Art I*

## 321300 **Art III**

Art III builds on previous content standards with a more in-depth approach. Students analyze and respond to art from various global cultures visually, verbally, and in written form. Students examine and relate various themes and purposes of art forms to the total educational process. They study art history, criticism, and aesthetics in relation to individually selected artworks and develop a personal philosophy of art. Students continue to develop personal portfolios which include products and critiques, and other reflective work as they develop a personal style. Students have the opportunity to participate in the Wyoming County Schools' Art Exhibition as well as other prescribed art exhibitions/competitions at local, regional, and state levels.

*Prerequisite: Art II*

## 321400 **Art IV**

Students develop and clarify their philosophy of art and art making through in-depth explorations with media, techniques, and processes. Students expand and refine their portfolios which reflect a broad base of artistic knowledge. 21<sup>st</sup> century learning and thinking skills, literacy in a variety of forms, and life skills are applied to content and projects. Students have the opportunity to



participate in the Wyoming County Schools' Art Exhibition as well as other prescribed art exhibitions/competitions at local, regional, and state levels.

*Prerequisite: Art III*

**323100 Art Appreciation** (Grades 11-12)

Students identify, discuss, and compare cultural and multi-cultural influences on the arts, including social, political, economic, functional, and aesthetic considerations. Students will develop a variety of critical analyses. Students will examine different philosophies and viewpoints. Students' experiences with art media within its historical context will connect selected artwork to the artist's process. Products and/or presentations relative cognitive learning to artistic practices.

**32310X College Art 112** (Grades 11-12) (*Dual/Weighted*)

*Course taught dual with Art Appreciation.*

Students are introduced to vocabulary and a frame of reference for informed and critical response to works of visual art. It also greatly expands their range of experience by presenting them with architecture, fine crafts, industrial design, graphic design, photography, printmaking, painting, sculpture, and other forms of visual art. By approaching art through visual logic, technical, historical, and cultural approaches, Art 112 helps students understand works of art as products of changing societies and technologies even more than as the works of individuals of great sensibility, intelligence, and even genius.

*Prerequisite: Criteria for Placement in Honors or Advanced Courses*

**361100 Band I**

Beginning band provides opportunities for students to learn wind and percussion instruments. Student will continue to refine basic playing skills and performance criteria while exploring relationships between music and other disciplines. Students will participate in a Christmas concert, spring concert, All-County Band Festival, and other prescribed band festivals and ratings.

**361200 Band II**

Intermediate level students will continue to develop basic playing skills. Student will learn additional notes, fingering and more rhythmic variations in notation. The student will further develop articulation, rhythmic interpretation, and self-evaluation skills. Students will participate in a Christmas concert, spring concert, All-County Band Festival, and other prescribed band festivals and ratings.

*Prerequisite: Band I*

**361300 Band III**

Advanced band students have progressed through intermediate study of a band instrument. The student will continue to refine playing skills and study various composers, compositions, and styles. The student will play in more keys, use ornamentation, and perform with more precision. The formal structures and elements of music will be studied along with how these are used by composers. The student will learn about the historical context of the music performed, especially American music. Students will participate in a Christmas concert, spring concert, All-County Band Festival, and other prescribed band festivals and ratings.

*Prerequisite: Band II*

**361400 Band IV**

Level four band students will continue to develop skill on their instrument while continuing exploration of other instruments during marching and concert seasons. The student, with self-direction and expression, performs an instrument, alone and collaboratively with others, a varied repertoire of music. The student will display insightful musicianship, leadership, adaptability, and

personal responsibility. Students will participate in a Christmas concert, spring concert, All-County Band Festival, and other prescribed band festivals and ratings.

*Prerequisite: Band III*

### 362100 **Chorus I**

Beginning students learn basic singing skills, performance criteria, and begin to explore relationships between music, and other disciplines.

### 362200 **Chorus II**

Intermediate students build on previously studied skills, learning additional choral techniques and more developed singing styles. They further develop their singing range, ensemble singing, sight-reading and self-evaluation skills.

*Prerequisite: Chorus I*

### 362300 **Chorus III**

The students at the Advanced level will continue to refine their singing skills. They study various composers, choral music and styles. They learn to sing using expression developing further technique.

*Prerequisite: Chorus II*

### 362400 **Chorus IV**

Level four choral students will study formal structures and elements of music applying them to singing. They will learn historical context of music selections and relate these to history and culture.

*Prerequisite: Chorus III*

### 331900 **Crafts**

This course teaches the same lessons as creative art-comprehensive courses, but do so with a focus on craft. A wide range of crafts may be surveyed, or the course may focus on only one type. Possibilities include, but not limited to, calligraphy, quilting, silk-screening, cake decorating, tole-painting, mask-making, knitting, crocheting, paper-making, etc.

### 340100 **Dance I**

Level I dance will focus on technical skills. In addition, the central part of the curriculum will be the major principles of choreography and the higher thinking skills necessary to employ dance as an effective means of communication.

### 340200 **Dance II**

Students will concentrate on comparing and contrasting dances of various cultures and historical periods as well as making connections between dance and other disciplines. Emphasis is on dance as a means of developing and maintaining a healthy lifestyle.

*Prerequisite: Dance I*

### 340300 **Dance III**

Third level dance will stress performing technical and choreographical skills necessary for artful presentation. Emphasis will be placed on the relationship of dance to careers. Research into dance history will be integral.

*Prerequisite: Dance II*

### 340400 **Dance IV**

Creating and performing dance is the emphasis on the fourth level class. The creative process will be studied and students will develop an awareness of dance and its place in the present and future culture.

*Prerequisite: Dance III*

### 372800 **Guitar**

The course will explore the mechanics of musical notation and the fundamentals necessary to read and write basic melodies and chords. The basic principles of playing acoustic/folk guitar will be taught. Instruction with electric guitars is at discretion of instructor. No musical background required.

### 374100 **Instrumental Ensemble**

This course is intended to develop technique for playing brass, woodwind, percussion (e.g., steel band), and/or string instruments in small ensemble groups. Instrumental ensemble courses cover one or more instrumental ensemble or band literature styles.

### 367100 **Music Appreciation/History/Humanities**

This course provides opportunities for non-performing students to examine the basic elements of music (melody, harmony/texture, form, rhythm, tempo, dynamics and timbre) while participating in the musical processes of singing, playing, improvising, creating, listening to and analyzing music of many genres and styles. The student will develop skills in reading and understanding music notation and explore the expressions and organization of musical ideas.

### 368100 **Piano**

Students will learn how to sit at the piano, how to hold their hands, and about the finger numbers. Students will be introduced to the concept of loud and soft tones by using more or less weight on the keys. As the course progresses, students will be instructed on the functions of the black keys and the white keys along with clefs and staves; intervals, slurs, and ties; G position; crescendo and diminuendo. Students will read music as their playing skills develop.

### 380100 **Theatre I**

Students will be able to analyze play texts; identify contemporary styles of theatre/drama and depict characters in them. Students will identify basic properties of technical theatre and demonstrate technical knowledge and skills. They will explore multiple interpretations for production ideas and research how non-dramatic art forms enhance a theatre production. Other areas include a variety of cultures and historical periods related to theatre.

### 380200 **Theatre II**

Students in drama will have the opportunity to act, sing and dance as well as work in the technical areas of theatre: costumes, set construction and design, props, make-up, sound, lighting, stage management and publicity. Advanced students are also involved in directing and play writing and leadership training.

*Prerequisite: Theatre I*

### 380300 **Theatre III**

Students in drama will have the opportunity to act, sing and dance as well as work in the technical areas of theatre: costumes, set construction and design, props, make-up, sound, lighting, stage

management and publicity. Advanced students are also involved in directing and lay writing.

*Prerequisite: Theatre II*

#### 380400 **Theatre IV**

Students in drama will have the opportunity to act, sing and dance as well as work in the technical areas of theatre: costumes, set construction and design, props, make-up, sound, lighting, stage management and publicity. Advanced students are also involved in directing and play writing.

*Prerequisite: Theatre III*

#### 385900 **Theatre/Stagecraft**

This course introduces students to basic crew techniques, location lighting and sound situations, costuming, production techniques, set design and construction.

#### 1431E0 **Digital Imaging/Multimedia I** *(Core course in the Coding, App, and Game Design program at the WCCTC)*

This course is designed to develop student knowledge and skills in such areas as producing images, operating a digital camera, using imaging software, using drawing software, creating simple animations and manipulating video images. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.

#### 1727E0 **Drafting Techniques** *(Core course in the Drafting program at the WCCTC)*

This course introduces the student to techniques used in advanced orthographic projection. Areas of study include sectioning, pictorial views, auxiliary views, patterns and developments, dimensioning, advanced 2D CAD techniques, and basic 3D modeling in CAD. Students will demonstrate knowledge and technical expertise in various fundamental drafting techniques.

#### 1982E0 **Ornamental Metalwork** *(Elective course in the Welding program at the WCCTC)*

This course introduces the student to the knowledge base and technical skills for concepts in the Ornamental Metal Work. Areas of study include measurement, metal layout and bending, operation of the drill press, band saw, and the iron worker. Incorporated into this course are elements of introductory knowledge and skills necessary for a career in welding. This course is recommended as an Elective in Welding.

## World Language

#### 566100 **Spanish I**

This course introduces students to basic forms of communication in the target language including listening, reading, writing and speaking. Basic verb patterns, sentence structure and pronunciation skills are covered thoroughly as well as basic conversation skills from everyday situations such as ordering in a restaurant, asking and responding to questions, greetings, salutations, etc. The course also offers a brief history/geography of Spain, Mexico and Latin America as well as the people occupying these lands. Finally, the course offers students an opportunity to expand their thinking and awareness of this very influential and populous culture.

#### 566200 **Spanish II**

This course builds upon the foundation of Spanish I and offers students an opportunity to do more in-depth writing, speaking, listening and reading. The course is more student-centered than the previous course in that the students are expected to use the target language in a more skillful

manner through dialogue, conversation, and writing. The important aspects of grammar and sentence structure are studied on a higher level of thinking. The cultures of Latin American history including the Incas, Aztecs and Mayas are covered. Contributions from the Spanish-speaking world are also explored.

Prerequisite: Spanish I

## Health and Physical Education

### 690900 **Health** *(Required of all Freshmen)*

This course prepares students to become wise health care consumers and responsible, productive citizens. The relationships among personal, community and world health and economic, cultural, sociological, biological, and environmental factors are examined in interdisciplinary discussions, debates, and class projects. Students examine personal health choices and the connection to the world of work and assumption of adult roles. In-depth analysis of current health issues and concepts coupled with school-wide opportunities that promote and reinforce the importance of good health and positive choices need to be coordinated to have the greatest impact on adolescent behavior. Instruction continues to focus on prevention of at risk behaviors. Instruction will also emphasize limiting the negative consequences of high-risk behavior and promote values and norms that are age-appropriate and realistic. Students should have a personal perception of risk, the ability to recognize and resist social pressures, and the skills to build positive social relationships.

### 660900 **Physical Education** *(Required of all Sophomores)*

This course provides the opportunity to comprehend and experience the benefits of physical activity in daily life. It develops the major components of fitness (cardio respiratory, muscular strength, muscular endurance, flexibility, and body composition) and it assures self-management skills necessary for a healthy life. Additionally, individual and team sports are explored. In accordance with W. Va. Code 18-2-7a the FITNESSGRAM shall be administered to all students.

### **Other Health and PE Courses**

#### 670900 **Fitness and Conditioning Activities**

The course expands upon the foundations of Physical Education/ Wellness class. The curriculum will concentrate on lifetime activities and nutritional habits that will enhance both cardiovascular fitness and weight control. Activities will coincide with facilities and seasonal opportunities.

#### 095100 **Food Preparation**

This course introduces scientific principles of nutrition, food preparation, and the relationship between eating habits and good health. A food preparation lab will be conducted with each concept to make the study of nutrition and foods come alive. Students desiring to work in food service, food preparation, nutrition or health related careers will benefit from this course.

#### 673300 **Lifetime Fitness Education**

The acquisition of knowledge and skills regarding lifetime physical fitness is emphasized in this course. Content may include related topics such as nutrition, stress management, and consumer issues. This course will help the student recognize how to achieve and maintain a healthy lifestyle through strength training, speed training, flexibility and nutrition. Students will develop and implement a personal fitness plan.

090200 **Parenting** (Grades 10-12)

Students will apply critical thinking to find solutions to practical problems related to parenthood and child care. Emphasis will be on the physical, mental, social and emotional development of early childhood. Students planning careers in day care, early childhood education, health related areas, as well as future parents, will benefit from this course.

674100 **Recreation Sports**

Recreation sports provided experience and develop skills in more than one recreational sport or activity such as tennis, badminton, bowling, croquet, Frisbee, bocce ball, fishing, hiking, cycling, ping pong, etc.

695100 **Safety and First Aid**

This course provides specialized instruction in first aid techniques, cardiopulmonary resuscitation, relief of obstructed airways, and general safety procedures and behaviors. Course topics may include an overview of community agencies and hotlines providing emergency care and information.

676500 **Weight Training**

This course develops skills with free weights and universal stations. Also included will be fitness, nutrition, basic anatomy, and maintaining a healthy lifestyle.

## Driver Education

681100 **Driver Education** (Grades 10-12)

Course will be offered to upper class students first. Student's 16<sup>th</sup> birthday should fall before the close of term in which they are taking the class. Fifteen-year-olds who will not turn 16 prior to the end of the term in which they are enrolled, are encouraged to obtain their fifteen year old driving permit before the starting date of the course in the term they are enrolling. The course provides basic skills of controlling a car and various maneuvers in driving.

## Technology and Computer Science

284600 **General Computer Applications I**

Designed for students with an interest in exploring the uses of personal computers. Students will be provided instruction and experience in previously written software packages. A wide range of applications are explored including (but not limited to) word processing, spreadsheet, graphics, and database. Students will use the internet for research and communicate by electronic mail. Additionally, students will gain experience in desktop publishing. Exercises and problems may be from any field. Career exploration will also be a component of the course.

284700 **General Computer Applications II**

Advanced applications utilizing word processing, spreadsheet, and database, desktop publishing software will be explored and will focus on preparing students based upon their individual career goals. Website construction and web publishing will be central focal points of this course.

*Prerequisite: Computer Applications I*

# L.I.N.K.S.

## 767600 LINKS

The **LINKS** program provides students with practice in life and work skills and broadens the students' knowledge base for career decisions. As students recognize the relevance of their course work to their career plans, they will have an incentive for higher academic achievement. More information leads to better decision making. Like-wise, it is our goal to provide students with enough information to help them make career choices that will lead to a meaningful, productive lifestyle. The end result will be students making a smooth transition from grade to grade and from high school to post-secondary education by successfully "linking" school to work. NOTE: This course is a pass/fail that will be taught during the advisory portion of the day. Students who successfully pass the course in each will earn a quarter credit, giving them a total of one credit upon the completion of their senior year.

## *CAREER AND TECHNICAL COURSES*

### **Aesthetics**

*Human Services (HU)*

#### Program of Study Description:

The Aesthetics Program of Study focuses knowledge, skills and methods of skin treatment and hair removal. These include electrolysis, microdermabrasion, permanent make up application, and reflexology. This Program of Study is delineated by the WV Board of Barbers and Cosmetology. Students will utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Students are encouraged to become active members of SkillsUSA. Teachers will provide each student with real world learning opportunities and instruction. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

#### Four Core Course Descriptions:

##### 1714E0 General Aesthetics I

This course will provide the knowledge and skills for working in the treatment room; basic facial practices; facial massage; hair removal; makeup; advanced topics and treatments as delineated by the West Virginia Board of Barbers and Cosmetologists.

##### 1731E0 Aesthetics Science

This course provides information on the aspects of aesthetics science such as: infection control; general anatomy and physiology; basics of chemistry; basics of electricity and basics of nutrition as delineated by the WV Board of Barbers and Cosmetologist.

##### 1732E0 Skin Sciences I

This course will provide the student with knowledge and skills to be able to: apply nail tips, wraps and gels; apply facial make-up; and practice various methods of hair removal -- as delineated by the WV Board of Barbers and Cosmetologists.

### 1737E0 Barbers and Cosmetology Foundations

This course develops knowledge and understanding of fundamental theory and practices of the Cosmetology profession as delineated by the WV Board of Barbers and Cosmetologists such as: effective communication, human relations, government organizations, professional organizations and development, first aid and general infection control.

### Electives Course Descriptions:

### 1739E0 General Aesthetics II

This course gives students the knowledge and skills of the aging process of skin, skin analysis and skin care products as delineated by the WV Board of Barbers and Cosmetologists.

## **Automotive Technology**

*Transportation, Distribution, and Logistics (TR)*

### Program of Study Description:

The Automotive Technology Program of Study focuses on careers that will build a knowledge base and technical skills in all aspects of the automotive industry. Skill set standards for Career Preparation Skills, Safety, Leadership Development and Customer and Personal Service have been integrated throughout the Program of Study. Student skills sets will be acquired for Automotive Maintenance and Light Repair in the areas of Automotive Service Consultant, Tire Repair and Replacement, Maintenance Services, Electrical System Diagnosis and Repair, Engine and Engine Performance Diagnosis and Repair, Heating and Air Conditioning Diagnosis and Repair, Brake System Diagnosis and Repair, Suspension and Steering Diagnosis and Repair, and Driveline Diagnosis and Repair. Students will have the opportunity to acquire hours towards industry certification and be exposed to skills to develop positive work ethics.

Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Safety instruction is integrated into all activities. Students are encouraged to become active members of the student organization, SkillsUSA West Virginia. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

### Four Core Course Descriptions:

### 1631E0 Automotive Technology MLR-1

This course introduces the student to the knowledge base and technical skills as they relate to the field of Automotive Technology. In the Automotive Technology MLR-1 class areas of study include Automotive Service Consultant, Career Opportunities and Practices, Shop and Personal Safety, Tools and Equipment, Preparing Vehicle for Service, Electrical-General Electrical System Diagnosis, Electrical-Diagnosis and Service of Batteries, and Engines-Lubrication and Cooling 4 Systems Diagnosis and Repair.

### 1623E0 Automotive Technology MLR-2

Automotive Technology MLR-2 continues as students are exposed to skills sets in areas such as Steering and Suspension-Diagnosis and Repair of Wheels and Tires, Brakes-Diagnosis and Repair of Hydraulic Systems, Brakes-Diagnosis and Repair of Drum Brake Systems, Brakes-Diagnosis



and Repair of Disk Brake Systems, Brakes-Diagnosis and Repair of Power Assist Units, Brakes-Diagnosis and Repair of Miscellaneous Automotive Items, Brakes-Diagnosis and Repair of Anti-lock Brake Systems and Steering and Suspension-Diagnosis of Steering & Suspension Systems.

**1625E0 Automotive Technology MLR-3**

Automotive Technology MLR-3 build student skill sets in the areas of Electrical-Demonstrate Starting System Diagnosis and Repair, Electrical-Demonstrate Charging System Diagnosis and Repair; Electrical-Demonstrate Lighting System Diagnosis and Repair, Electrical-Demonstrate Accessories System Diagnosis and Repair, Engines, General Engines, Engines-Diagnosis and Repair of Cylinder Head and Valve Train, and Engine Performance-General Engine Diagnosis.

**1637E0 Automotive Technology MLR-4**

Automotive Technology MLR-4 completes the Program of Study with skills sets in the areas of Engine Performance-Computerized Engine Controls; Engine Performance-Fuel, Air Induction, and Exhaust Systems Diagnosis and Repair; Engine Performance-Emissions Control Systems Diagnosis and Repair; Automatic Transmission and Transaxle-Diagnosis Maintenance, and Adjustment; Manual Drive Train and Axles-Diagnosis, Maintenance, and Adjustment; and Heating and Air Conditioning-Diagnosis, Maintenance, and Adjustment.

**Four Electives Course Descriptions:**

**1629E0 Automotive Technology AST-1**

The Skill Sets in Automotive Technology AST-1 will introduce students to the skills sets related to Electrical-Electrical/Electronic System Basics; and Alternative Fuels-Hybrid Vehicles; NAFTA Program or Additional electrical Tasks from NATEF MAST Program.

**1633E0 Automotive Technology AST-2**

The Skill Sets in Automotive Technology AST-2 will concentrate on the skills sets related to Steering and Suspension; and Brakes.

**1635E0 Automotive Technology AST-3**

The Skill Sets in Automotive Technology AST-3 will introduce students to Engines-General Engines: Engine Diagnosis; Removal and Re-installation (R&R); Engines-Diagnosis and Repair of Cooling and Lubrication Systems; and Engine Performance-General Engine Diagnosis.

**1627E0 Automotive Technology AST-4**

The Skill Sets in Automotive Technology AST-4 will introduce students to the skills, technology, and service of Automatic Transmission and Transaxle-Diagnosis, Maintenance, Repair and Adjustment; Manual Drive Train and Axles-Diagnosis, Maintenance, Repair and Adjustment; and Heating and Air Conditioning-Diagnosis, Maintenance, Repair and Adjustment.

## **Carpentry**

*Architecture and Construction (AR)*

**Program of Study Description:**

The Carpentry Program of Study focuses on careers that will build a knowledge base and technical skills in all aspects of the carpentry industry. Learners will be exposed to a broad range of construction careers and foundation knowledge including basic safety; plan reading; use of tools

and equipment; basic rigging; and how to employ positive work ethics in their careers. Students will have the opportunity to earn NCCER certification for each skill set mastered.

Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Safety instruction is integrated into all activities. Emphasis will be placed on career exploration, job seeking skills and personal and professional ethics. Students are encouraged to become active members of the student organization, WV SkillsUSA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

#### Four Core Course Descriptions:

##### 1842E0 **Carpentry I**

This course introduces the student to the knowledge base and technical skills of the carpentry industry. Carpentry I begins with the NCCER Core curriculum which is a prerequisite to all Level I completions. The students will complete modules in Basic Safety; Introduction to Construction Math; Introduction to Hand Tools; Introduction to Power Tools; Introduction to Construction Drawings; Basic Rigging; Basic Communication Skills; Basic Employability Skills; and Introduction to Materials Handling. Students will then begin developing skill sets related to the fundamentals of Carpentry such as Orientation to the Trade; Building Materials, Fasteners, and Adhesives; and Hand and Power Tools.

##### 1843E0 **Carpentry II**

Carpentry II will continue to build student skill sets in areas such as Reading Plans and Elevations; Floor Systems, Wall and Ceiling Framing; Roof Framing; Introduction to Concrete, Reinforcing Materials, and Forms; Windows and Exterior Doors; Basic Stair Layout.

##### 1844E0 **Carpentry III**

Carpentry III will continue to build student skill sets in areas of Commercial Drawings; Roofing Applications; Thermal and Moisture Protection; and Exterior Finishing.

##### 1845E0 **Carpentry IV**

Carpentry IV will continue to build student skill sets in areas of Cold-Formed Steel Framing; Drywall Installation; Drywall Finishing; Doors and Door Hardware; Suspended Ceilings; Window, Door, Floor, and Ceiling Trim; Cabinet Installation; and Cabinet Fabrication.

#### Four Electives Course Descriptions:

##### 1820E0 **Applications in Commercial Construction**

This course introduces the student to the knowledge base and technical skills for concepts in the building construction Program of Study. Areas of study include site layout and preparation, form construction, steel framing, suspended ceilings and floor coverings.

##### 1821E0 **Concrete Finishing**

This course introduces the student to the knowledge base and technical skills for concepts in the Building Construction Program of Study. Areas of study include estimation, concrete construction, finishing concepts, properties of concrete, tools and equipment, concrete placement, work site preparation, finishing techniques, curing and protecting and troubleshooting concrete problems.

### 1822E0 **Blueprint Reading For Construction**

This course introduces the student to the knowledge base and technical skills for concepts in the Building Construction Program of Study. Areas of study include identifying various blueprints, terms, symbols, components, dimensions, classifications and construction task objectives.

### 1829E0 **Masonry and Plumbing**

This course introduces the student to the knowledge base and technical skills for concepts in the Building Construction Program of Study. Areas of study include estimation, masonry materials, rough in plumbing systems and installation of finish plumbing.

## **Certified Nursing Assistant**

*Health Science (HE)*

### Program of Study Description:

The Allied Health Program of Study allows the student to explore occupations focused primarily on changing the health status of the patient over time. Health professionals in this Program of Study work directly with patients; they may provide care, treatment and health education information. Skill sets taught can lead to an entry level certification and preparation for continuing in a postsecondary learning environment.

Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and Content skill sets.

### Four Core Course Descriptions:

#### 0711E0 **Foundations of Health Science**

This course is designed to allow instructional content to focus on basic medical terminology, growth and development, nutrition, health maintenance practices and healthcare delivery systems. It is designed to provide the student with knowledge and technical skills required for infection control and the prevention of disease transmission, CPR and First Aid. Students will be provided with the opportunity to acquire certification in these areas.

#### 0715E0 **Advanced Principles of Health Science**

Instructional content will focus on healthcare safety, environmental safety processes and procedures, ethical and legal responsibilities and mathematical computations. Medical terminology and the reinforcement, expansion and enhancement of biology content specific to diseases and disorders are an integral part of the course. Instruction will incorporate project and problem based healthcare practices and procedures to demonstrate the importance of these skills. Students will develop basic technical skills required for all health career specialties including patient privacy, communication, teamwork and occupational safety and be provided with opportunities to obtain certifications in HIPPA/Data Privacy and health care safety.

### 0789E0 Clinical Specialty I

This course is designed to allow the student to choose a career work-based experience from the following specializations:

**Select 1:** Advanced Health Seminar, Certified Nursing Assistant, Certified ECG Technician, Certified Health Unit Coordinator, Certified Patient Care Technician, Certified Phlebotomy Technician, Community Emergency Response Team , Dental Aide, Dietary Aide, Direct Care Worker, Electronic Health Record Specialist, Environmental Services, Orientation to Practical Nursing, Laundry Aide , Physical Therapy Aide, Pre-Pharmacy Technician, Imagery Aide, Veterinary Science Aide.

Upon successful completion of the prerequisite courses in the Health Science Education Program of Study, students will be provided the opportunity in Clinical Specialty I to participate in a work-based clinical experience. Students choose a health career specialty for in-depth study and must complete a minimum of 25-55 hours in an applicable clinical rotation. Instruction is guided by career-specific Content skill sets that must be mastered before students are eligible to attain established credentials and/or industry validation. Within this course, students focus upon employability skills and career development, and apply healthcare information technology and technical skills. Instruction will incorporate project and problem-based healthcare practices and procedures to demonstrate the criticality of these skills. Due to healthcare industry standards, exemplary attendance is mandatory.

### 0790E0 Clinical Specialty II

This course is designed to allow the student to choose a career work-based experience from the following specializations:

**Select 1:** Advanced Health Seminar, Certified Nursing Assistant, Certified ECG Technician, Certified Health Unit Coordinator, Certified Patient Care Technician, Certified Phlebotomy Technician, Community Emergency Response Team , Dental Aide, Dietary Aide, Direct Care Worker, Electronic Health Record Specialist, Environmental Services, Orientation to Practical Nursing, Laundry Aide , Physical Therapy Aide, Pre-Pharmacy Technician, Imagery Aide, Veterinary Science Aide.

Upon successful completion of the prerequisite courses in the Health Science Education Program of Study, students will be provided the opportunity in Clinical Specialty II to participate in a work-based clinical experience. Students choose a health career specialty for in-depth study and must complete a minimum of 25-55 hours in an applicable clinical rotation. Instruction is guided by career-specific Content skill sets that must be mastered before students are eligible to attain established credentials and/or industry validation. Within this course, students focus upon employability skills and career development, and apply healthcare information technology and technical skills. Instruction will incorporate project and problem-based healthcare practices and procedures to demonstrate the criticality of these skills. Due to healthcare industry standards, exemplary attendance is mandatory.

### Four Elective Course Descriptions:

#### 0716E0 Body Structures and Functions *(Weighted)*

This course focuses on the structure and function of each system in the human body. Additional instructional components include concepts that pertain to the body as a whole, applicable medical terminology and the pathophysiology common to each system.

Prerequisite: Criteria for Placement in Honors or Advanced Courses

### 0720E0 ECG/Phlebotomy

Upon successful completion of this course, students will master competencies consistent in the areas of ECG Technician and Phlebotomist. Students can become certified ECG Technician and/or certified Phlebotomy Technician.

### 0721E0 Medical Terminology (*Weighted*)

Through the study of medical terminology, the student will be introduced to the language of medicine. Students will gain an understanding of basic elements, rules of building and analyzing medical words, and medical terms associated with the human body utilizing a systems approach. Prerequisite: Criteria for Placement in Honors or Advanced Courses

### 1060E0 Essentials of Addiction and Prevention

Students will examine the essentials of addiction and prevention strategies. This course aligns with domains, tasks and knowledge skills from The WV Certification Board for Addictions Prevention Professionals Certified Prevention Specialist Manual.

## **Coding, App, and Game Design**

*Information Technology (IT)*

### Program of Study Description:

The Coding, App and Game Development provides knowledge and skills necessary for a career in coding, game and app design, web page publishing, computer programming, and software development industries. Students receive training in both the graphic design and technical programming elements of the industry.

### Four Core Course Descriptions:

#### 1431E0 Digital Imaging/Multimedia I (Core Course 1)

This course is designed to develop student knowledge and skills in such areas as producing images, operating a digital camera, using imaging software, using drawing software, creating simple animations and manipulating video images. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.

*Fine art credit is possible at completion of this course.*

#### 1455E0 Web Page Publishing (Core Course 2)

This course is designed to develop student understanding and skills in such areas as Web page design including using Web page development software, creating page layouts, adding images and frames, creating elements and components, creating tables, managing files, publishing to the Internet, creating hyperlinks, organizing tasks and using codes (markup languages).

#### 1456E0 Coding, App and Game Design I (Core Course 3)

This course is designed to develop student knowledge and skills in programming and designing game and app ideas paper prototyping and other planning techniques. Using various design platforms, programming languages, drawing and animation techniques, students create an interactive demonstration of the games and apps.

#### 1457E0 Coding, App and Game Design II (Core Course 4)

This course is designed to develop student knowledge and skills in developing apps and games using more advanced coding and graphic design including both 2D and 3D elements. Students

utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.

## **Diesel Equipment Technology**

*Transportation, Distribution, and Logistics (TR)*

### Program of Study Description:

The Diesel Equipment Technology Program of Study focuses on careers that will build a knowledge base and technical skills in all aspects of the Diesel Equipment Technology industry. Students will have the opportunity to acquire hours towards industry ASE/NATEF certification and be exposed to skills to develop positive work ethics.

Safety instruction is integrated into all activities. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, WV SkillsUSA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

### Four Core Course Descriptions:

#### 1741E0 Diesel Engine Components

This course introduces the student to the knowledge base and technical skills as they relate to the field of Diesel Equipment Technology. In the Diesel Engine Components class areas of study include basic engine components, primary functions, service, inspection, and assembly procedures.

#### 1744E0 Electronic Engine Controls

This course introduces the student to the knowledge base and technical skills for concepts in diesel electronic engine controls. Areas of study include electronic control modules, electronic fuel injection, and electronic control test equipment. Emphasis will be placed on career exploration, job seeking skills, and personal and professional ethics.

#### 1747E0 Diesel Support Systems

This course introduces the student to the knowledge base and technical skills as they relate to Diesel Support Systems. In the Diesel Support Systems class areas of study include areas such as lubricating and cooling systems, air intake and exhaust systems, starting and charging systems, engine retarders, fuel systems, and governor operation.

#### 1751E0 Fundamentals of Diesel Equipment Technology

This course introduces the student to the knowledge base and technical skills as they relate to the field of Fundamentals of Diesel Equipment Technology. In the Fundamentals of Diesel Equipment Technology class areas of study include personal and shop safety, career opportunities in the diesel technology industry, the proper use of hand and power tools, basic oxyacetylene cutting, electric welding, and basic shop etiquette.

### Four Elective Course Descriptions:

#### 1742E0 Diesel Equipment Electrical Systems

The Skill Sets in this course are representative of the basic knowledge included in a Career and Technical Diesel Equipment Technology Program of Study. Incorporated into this course are heavy-truck electrical theory, engine and truck wiring circuits, storage batteries and diesel electrical system testing.

#### 1743E0 Diesel Engine Tune Up and Trouble Shooting

The Skill Sets in this course are representative of the basic knowledge included in a Career and Technical Diesel Equipment Technology Program of Study. Incorporated into this course are elements of introductory knowledge and skills necessary for a career in diesel mechanics.

#### 1745E0 Diesel Preventive Maintenance and Inspection

The Skill Sets in this course are representative of the basic knowledge included in a Career and Technical Diesel Equipment Technology Program of Study. Incorporated into this course include engine system maintenance, under hood and cab maintenance, electrical/electronic systems, frame and chassis maintenance.

#### 1749E0 Diesel Truck Chassis Concepts

The Skill Sets in this course are representative of the basic knowledge included in a Career and Technical Diesel Equipment Technology Program of Study. Incorporated into this course are elements of transmissions, clutches, suspension, steering, and air brakes. Emphasis will be placed on operating theory, removal and installation of major components, and service and inspection procedures for a career in diesel equipment technology.

## **Direct Care Worker/Home Health Aide**

*Health Science (HE)*

### Program of Study Description:

The Allied Health Program of Study allows the student to explore occupations focused primarily on changing the health status of the patient over time. Health professionals in this Program of Study work directly with patients; they may provide care, treatment and health education information. Skill sets taught can lead to an entry level certification and preparation for continuing in a postsecondary learning environment.

Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and Content skill sets.

### Four Core Course Descriptions:

#### 0711E0 Foundations of Health Science

This course is designed to allow instructional content to focus on basic medical terminology, growth and development, nutrition, health maintenance practices and healthcare delivery systems. It is designed to provide the student with knowledge and technical skills required for infection control

and the prevention of disease transmission, CPR and First Aid. Students will be provided with the opportunity to acquire certification in these areas.

### 0715E0 **Advanced Principles of Health Science**

Instructional content will focus on healthcare safety, environmental safety processes and procedures, ethical and legal responsibilities and mathematical computations. Medical terminology and the reinforcement, expansion and enhancement of biology content specific to diseases and disorders are an integral part of the course. Instruction will incorporate project and problem based healthcare practices and procedures to demonstrate the importance of these skills. Students will develop basic technical skills required for all health career specialties including patient privacy, communication, teamwork and occupational safety and be provided with opportunities to obtain certifications in HIPPA/Data Privacy and health care safety.

### 0789E0 **Clinical Specialty I**

This course is designed to allow the student to choose a career work-based experience from the following specializations:

**Select 1:** Advanced Health Seminar, Certified Nursing Assistant, Certified ECG Technician, Certified Health Unit Coordinator, Certified Patient Care Technician, Certified Phlebotomy Technician, Community Emergency Response Team , Dental Aide, Dietary Aide, Direct Care Worker, Electronic Health Record Specialist, Environmental Services, Orientation to Practical Nursing, Laundry Aide , Physical Therapy Aide, Pre-Pharmacy Technician, Imagery Aide, Veterinary Science Aide.

Upon successful completion of the prerequisite courses in the Health Science Education Program of Study, students will be provided the opportunity in Clinical Specialty I to participate in a work-based clinical experience. Students choose a health career specialty for in-depth study and must complete a minimum of 25-55 hours in an applicable clinical rotation. Instruction is guided by career-specific Content skill sets that must be mastered before students are eligible to attain established credentials and/or industry validation. Within this course, students focus upon employability skills and career development, and apply healthcare information technology and technical skills. Instruction will incorporate project and problem-based healthcare practices and procedures to demonstrate the criticality of these skills. Due to healthcare industry standards, exemplary attendance is mandatory.

### 0790E0 **Clinical Specialty II**

This course is designed to allow the student to choose a career work-based experience from the following specializations:

**Select 1:** Advanced Health Seminar, Certified Nursing Assistant, Certified ECG Technician, Certified Health Unit Coordinator, Certified Patient Care Technician, Certified Phlebotomy Technician, Community Emergency Response Team , Dental Aide, Dietary Aide, Direct Care Worker, Electronic Health Record Specialist, Environmental Services, Orientation to Practical Nursing, Laundry Aide , Physical Therapy Aide, Pre-Pharmacy Technician, Imagery Aide, Veterinary Science Aide.

Upon successful completion of the prerequisite courses in the Health Science Education Program of Study, students will be provided the opportunity in Clinical Specialty II to participate in a work-based clinical experience. Students choose a health career specialty for in-depth study and must complete a minimum of 25-55 hours in an applicable clinical rotation. Instruction is guided by career-specific Content skill sets that must be mastered before students are eligible to attain established credentials and/or industry validation. Within this course, students focus upon employability skills and career development, and apply healthcare information technology and technical skills. Instruction will incorporate project and problem-based healthcare practices and



procedures to demonstrate the criticality of these skills. Due to healthcare industry standards, exemplary attendance is mandatory.

Four Elective Course Descriptions:

0716E0 **Body Structures and Functions** *(Weighted)*

This course focuses on the structure and function of each system in the human body. Additional instructional components include concepts that pertain to the body as a whole, applicable medical terminology and the pathophysiology common to each system.

0720E0 **ECG/Phlebotomy**

Upon successful completion of this course, students will master competencies consistent in the areas of ECG Technician and Phlebotomist. Students can become certified ECG Technician and/or certified Phlebotomy Technician.

0721E0 **Medical Terminology** *(Weighted)*

Through the study of medical terminology, the student will be introduced to the language of medicine. Students will gain an understanding of basic elements, rules of building and analyzing medical words, and medical terms associated with the human body utilizing a systems approach.

1060E0 **Essentials of Addiction and Prevention**

Students will examine the essentials of addiction and prevention strategies. This course aligns with domains, tasks and knowledge skills from The WV Certification Board for Addictions Prevention Professionals Certified Prevention Specialist Manual.

## Drafting

*Architecture and Construction (AR)*

Program of Study Description:

The Drafting Program of Study focuses a broad range of architecture and construction careers and foundation knowledge including basic safety, plan reading, use of tools and equipment as well as how to employ positive work ethics in a drafting career.

Emphasis will be placed on personal and professional ethics, and students will explore a variety of career opportunities. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, WV SkillsUSA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

Four Core Course Descriptions:

1721E0 **Architectural Drafting** *(Weighted)*

This course introduces students to the specialization of architectural drawing and design. Areas of study include architectural styles, floor plans, dimensioning and annotation, site and foundation plans, elevations and section layouts, and residential utilities.

Prerequisite: Criteria for Placement in Honors or Advanced Courses

### 1725E0 Mechanical Drafting

This course introduces the student to the knowledge base and technical skills necessary for mechanical drafting. Areas of study include advanced dimensioning techniques, assembly drawings, threads and fasteners, gears and cams, welding, and basic solid modeling.

### 1727E0 Drafting Techniques

This course introduces the student to techniques used in advanced orthographic projection. Areas of study include sectioning, pictorial views, auxiliary views, patterns and developments, dimensioning, advanced 2D CAD techniques, and basic 3D modeling in CAD. Students will demonstrate knowledge and technical expertise in various fundamental drafting techniques.

*Fine art credit is possible at completion of this course.*

### 1729E0 Fundamentals of Drafting

This course introduces the student to the knowledge base and technical skills for all courses in the Drafting Program of Study. Areas of study include tools and equipment, measurement, basic drafting techniques, freehand technical sketching, orthographic projection, dimensioning, basic computer skills, and drawing techniques.

### Four Elective Course Descriptions:

#### 1575E0 AC Advanced Manufacturing I: Advanced Tech for Design and Production

A project based course that introduces students to manufacturing's role in our society. In addition to concentrating on design and problem solving the course introduces the students to several other concepts as well including an introduction to control system technology, automated manufacturing systems and robotics.

#### 1576E0 AC Advanced Manufacturing II: Systems of Advanced Technology

This course applies the learning from the first course. This course involves projects related to the systems that are found in factories. Students learn about effective and energy efficient use of motors, drive systems, pumping systems, conveyors, piping and control systems. Students focus on properties of materials and materials testing creating documentation examining the properties and justifying selections based on the properties. Students learn that some products manufactured become the raw materials for more complex products. Students explore the technologies utilized in manufacturing.

#### 1723E0 Civil Drafting

This course will introduce students to the specialization of civil drafting and design. Areas of study include maps and construction and utilization of survey data.

#### 1726E0 Structural Steel Drafting

This course introduces the student to the knowledge base and technical skills for structural steel drafting. Areas of study include structural steel, high strength bolts, welding symbols and structural truss floor plans.

# **Electrical Technician**

*Architecture and Construction (AR)*

## Program of Study Description:

The Electrical Technician Program of Study focuses on careers that will build a knowledge base and technical skills in all aspects of the Electrical Trades industry. Students will have the opportunity to earn NCCER certification for each skill set mastered and be exposed to skills to develop positive work ethics.

Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, WV SkillsUSA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets. Safety instruction is integrated into all activities. Emphasis will be placed on career exploration, job seeking skills and personal and professional ethics.

## Four Core Course Descriptions

### 1756E0 Electrical Trades I

This course introduces the student to the knowledge base and technical skills of the Electrical Trades industry. Electrical Trades I begin with the NCCER Core curriculum which is a prerequisite to all Level I completions. The students will complete modules in Basic Safety; Introduction to Construction Math; Introduction to Hand Tools; Introduction to Power Tools; Introduction to Construction Drawings; Basic Rigging; Basic Communication Skills; Basic Employability Skills; and Introduction to Materials Handling. Students will then begin developing skill sets related to the fundamentals of Electricity such as Orientation to the Electrical Trade; and Electrical Safety.

### 1757E0 Electrical Trades II

Electrical Trades II will continue to build student skill sets in areas such as Introduction to Electrical Circuits; Electrical Theory; Introduction to the National Electrical Code ®; Device Boxes; Hand Bending; Raceways and Fittings; Conductors and Cables; Basic Electrical Construction Drawings; Residential Electrical Services; and Electrical Test Equipment.

### 1758E0 Electrical Trades III

Electrical Trades III will continue to build student skill sets in areas of Alternating Current; Motors: Theory and Application; Electric Lighting; and Conduit Bending. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, WV SkillsUSA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

### 1759E0 Electrical Trades IV

Electrical Trades IV will continue to build student skill sets in areas of Pull and Junction Boxes; Conductor Installations; Cable Tray; Conductor Terminations and Splices; Grounding and Bonding; Circuit Breakers and Fuses; and Control Systems and Fundamental Concepts.

## Electives Course Descriptions

### **1762E0 Blueprint Reading For Electricians**

This course introduces the student to the knowledge base and technical skills regarding Blueprint Reading for Electricians. Areas of study include building plans and specifications and blueprint and schematic reading. Emphasis will be placed on career exploration, job seeking skills and personal and professional ethics. Safety instruction is integrated into all activities. Students will utilize problem-solving techniques and participate in laboratory activities to develop an understanding of course concepts.

### **1766E0 Integrated Electrical Lab**

This course introduces the student to the knowledge base and technical skills for concepts in the Integrated Electrical Lab. Areas of study include electrical installation project, rough-in procedure, test and check circuits and termination and trim-out.

### **1767E0 National Electrical Code**

In this course students will learn to read and navigate National Electric Code.

### **1769E0 Residential Wiring**

In this course students will learn to read residential floor plans and install the necessary circuits need for home electrical use.

## **Electronics Technician**

*Manufacturing (MA)*

### Program of Study Description:

The Electronic Systems Technician Program of Study focuses on careers that will build a knowledge base and technical skills in all aspects of the Electronic Trades industry. Students will have the opportunity to earn NCCER certification for each skill set mastered and be exposed to skills to develop positive work ethics.

Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organizations, WV SkillsUSA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

### Four Core Course Descriptions:

#### **1666E0 DC Circuit Concepts**

This course introduces the student to the knowledge base and technical skills of the Electrical Trades industry. Electrical Trades I begins with the NCCER Core curriculum which is a prerequisite to all Level I completions. The students will complete modules in Basic Safety; Introduction to Construction Math; Introduction to Hand Tools; Introduction to Power Tools; Introduction to Construction Drawings; Basic Rigging; Basic Communication Skills; Basic Employability Skills; and Introduction to Materials Handling. Students will then begin developing skill sets related to the fundamentals of Electronics such as Introduction to the Trade; and Wood and Masonry Construction Methods.

### 1667E0 AC Circuit Concepts

AC Circuit Concepts will continue to build student skill sets in areas such as Concrete and Steel Construction Methods; Pathways and Spaces; Craft Related Mathematics; Hand Bending Conduit; Introduction to the National Electrical Code®; and Low-Voltage Cabling.

### 1668E0 Analog Circuits and Systems

Analog Circuits and Systems will continue to build student skill sets in areas of DC Circuits; AC Circuits; Switching Devices and Timers; Semiconductors and Integrated Circuits; and Test Equipment.

### 1669E0 Digital and Computer Concepts (*Weighted*)

Digital and Computer Concepts will continue to build student skill sets in areas of Introduction to Electrical Drawings; Introduction to Codes and Standards; Cable Selection; Wire and Cable Terminations; and Power Quality and Grounding.

Prerequisite: Criteria for Placement in Honors or Advanced Courses

## **Engineering Design and Automated Systems (Advanced Careers)**

*Manufacturing (MA)*

### Program of Study Description:

Advanced Manufacturing is a family of activities that (a) depend on the use and coordination of information, automation, computation, software, sensing, and networking, and/or (b) make use of cutting edge materials and emerging capabilities enabled by the physical and biological sciences, for example nanotechnology, chemistry, and biology. This involves both new ways to manufacture existing products, and especially the manufacture of new products emerging from new advanced technologies.

*Weighted credit awarded following completion of four core courses.*

### Four Core Course Descriptions:

#### 1575E0 AC Advanced Manufacturing I—Introduction to Mechanical Design

A project based course that introduces students to manufacturing's role in our society. In addition to concentrating on design and problem solving the course introduces the students to several other concepts as well including an introduction to control system technology, automated manufacturing systems and robotics.

#### 1576E0 AC Advanced Manufacturing II—Mechanical Simulation and Design Analysis

This course applies the learning from the first course. This course involves projects related to the systems that are found in factories. Students learn about effective and energy efficient use of motors, drive systems, pumping systems, conveyors, piping and control systems. Students focus on properties of materials and materials testing creating documentation examining the properties and justifying selections based on the properties. Students learn that some products manufactured become the raw materials for more complex products. Students explore the technologies utilized in manufacturing.

### 1577E0 **AC Advanced Manufacturing III—Electrical and Electronic Systems for Automation**

This is the third course in the four-course sequence and focuses on industrial control and automation systems as they apply to the advanced manufacturing equipment. This equipment depends on the use and coordination of information, automation, computation, software, sensing, and networking. Students will design and create mechatronic systems to accomplish advanced manufacturing tasks. Students will also create sophisticated technical reports similar to ones generated by engineers in this industry.

### 1578E0 **AC Advanced Manufacturing IV—Pneumatic Systems for Automation**

This course allows students to apply knowledge of materials to the design for manufacturing necessary to bring a product to market. Students explore the business of manufacturing while creating work cells to process materials into products. Students design a prototype and then redesign with the goal of manufacturing the product. Students analyze and evaluate all aspects of the design and production process with an emphasis on lean, green manufacturing. Students pay special attention to the control systems integration, data acquisition, and quality control processes necessary for Six Sigma production.

## **Hair Styling**

*Human Services (HU)*

### Program of Study Description:

The Hair Stylist Program of Study focuses on the knowledge, skills and principles of shampooing; cut; color; and styles men and women's hair; discuss scalp and hair issues; cut and style wigs and remove unwanted hair as delineated by the WV Board of Barbers and Cosmetology. Students will utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers will provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of SkillsUSA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

### Four Core Course Descriptions:

#### 1734E0 **Cosmetology Professional I**

This course provides knowledge and skills for working with hair and scalp, scalp treatment, shampoo and rinse, facial shapes, and hair styles as delineated by the WV Board of Barbers and Cosmetologists. Students also gain the professional or skilled knowledge and skills necessary in beginning a career in hairstyling profession.

#### 1735E0 **Cosmetology Professional II**

This course will provides knowledge and skills for working with wigs, hair additions, braiding and extensions as delineated by the WV Board of Barbers and Cosmetologist.

#### 1736E0 **Cosmetology Professional Advanced**

This course will provide the knowledge and skills for haircutting as delineated by the WV Board of Barbers and Cosmetologists. The program area provides individuals with the principles, practices, and concepts involved in haircutting.

### 1737E0 Barbers and Cosmetology Foundations

This course develops knowledge and understanding of fundamental theory and practices of the Cosmetology profession as delineated by the WV Board of Barbers and Cosmetologists such as: effective communication, human relations, government organizations, professional organizations and development, first aid and general infection control.

#### Electives Course Descriptions:

### 1738E0 Cosmetology Science I

This course provides information on the scientific aspects of cosmetology as delineated by the WV Board of Barbers and Cosmetologists such as: human anatomy; the basics of chemistry and electricity; infection control; and tools and equipment.

### 1740E0 Cosmetology Science II

This course will provide the student with information on electricity and chemical products used in cosmetology and the effects on the human anatomy as delineated by the WV Board of Barbers and Cosmetologists. The program area provides individuals with the principles, practices, and concepts involved in cosmetology. Students also gain the professional or skilled knowledge and concepts involved in cosmetology.

### 1730E0 Cosmetology Chemicals I

This course will provide knowledge and skills for scalp care, shampooing and conditioning as delineated by the WV Board of Barbers and Cosmetologists such as: explaining the importance of pH in shampoo selection, role of surfactants in shampoo, selection of various types of shampoo and conditioners, proper scalp manipulation, shampooing and conditioning procedures.

### 1750E0 Cosmetology Chemicals II

This course will provide knowledge and skills for working with chemical texture services and hair coloring as delineated by the WV Board of Barbers and Cosmetologist such as: factors in hair analysis for chemical texture services, types of permanent waving, basic wrapping procedures, difference between neutralizers and relaxers, color theory and techniques.

## **Information Management**

*Information Technology (IT)*

#### Program of Study Description:

The Information Management Program of Study focuses on careers that produce images through hands-on activities and experiences which will include: operating a digital camera, using imaging software, using drawing software, creating simple animations and manipulating video images. Students will incorporate journalistic principles in design and layout of print and Web publications including integration of text and graphics and use of sophisticated hardware and software to develop and create quality materials for business-related tasks. Students will analyze the information and the audience and combine appropriate text, graphics and design to communicate the desired message effectively.

Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the

student organizations, DECA or FBLA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

Four Core Course Descriptions:

**1411E0 Business Computer Applications I Microsoft IT Word and PowerPoint**

This course is designed to develop student understanding and skills in such areas as Microsoft Word and Microsoft PowerPoint. This course prepares students for the Microsoft Word Office Specialist Exam and for the Microsoft PowerPoint Office Specialist Exam.

**1431E0 Digital Imaging/Multimedia I**

This course is designed to develop student knowledge and skills in such areas as producing images, operating a digital camera, using imaging software, using drawing software, creating simple animations and manipulating video images.

**1413E0 Business Computer Applications II Microsoft IT Excel and Access**

This course is designed to develop student understanding and skills in such areas as Microsoft Excel and Microsoft Access. This course prepares students for the Microsoft Excel Office Specialist Exam and for the Microsoft Access Office Specialist Exam.

**1455E0 Web Page Publishing**

This course is designed to develop student understanding and skills in such areas as Web page design including using Web page development software, creating page layouts, adding images and frames, creating elements and components, creating tables, managing files, publishing to the Internet, creating hyperlinks, organizing tasks and using codes (markup languages).

## **Industrial Equipment Maintenance**

*Manufacturing (MA)*

Program of Study Description:

The Industrial Equipment Maintenance Program of Study focuses on careers that will build a knowledge base and technical skills in all aspects of the Industrial Equipment Maintenance industry. Students will have the opportunity to be to develop positive work ethic skills. Safety instruction is integrated into all activities. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organizations, WV SkillsUSA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

Four Core Course Descriptions:

**1871E0 Electrical Maintenance**

This course introduces the student to the knowledge base and technical skills for entry level skills in industrial Electrical Maintenance. Areas of study include basic electrical theory and calculations, electrical tools, instruments and safety, electrical symbols and diagrams, industrial power and control circuits, electrical equipment and devices, electrical motors, and an introduction to programmable logic controllers, as applied in industrial locations. Emphasis will be placed on career exploration, job seeking skills, and personal and professional ethics.



### **1873E0 Fundamentals of Industrial Equipment Maintenance**

This course introduces the student to the knowledge base and technical skills for entry level skills in Industrial Maintenance. Areas of study include workplace safety, measurement and calculation, tools, fasteners, lubrication and bearings, mechanical and belt drives, and mechanical alignment and vibration. Emphasis will be placed on career exploration, job seeking skills, and personal and professional ethics.

### **1875E0 Hydraulic and Pneumatic Systems**

This course introduces the student to the knowledge base and technical skills related to industrial Hydraulic and Pneumatic Systems. Areas of study include hydraulic principles, practical application of hydraulic systems, pneumatic principles, and practical application of pneumatic systems. Emphasis will be placed on career exploration, job seeking skills, and personal and professional ethics.

### **1985E0 Fundamentals of Welding Technology**

This course introduces the student to the knowledge base and technical skills for all courses in Welding Technology. Areas of study include career opportunities in welding, welding terms and processes, oxyfuel cutting, lab, and equipment safety.

### **Elective Course Descriptions:**

### **1577E0 AC Advanced Manufacturing III—Electrical and Electron Systems for Automation**

This is the third course in the four-course sequence and focuses on industrial control and automation systems as they apply to the advanced manufacturing equipment. This equipment depends on the use and coordination of information, automation, computation, software, sensing, and networking. Students will design and create mechatronic systems to accomplish advanced manufacturing tasks. Students will also create sophisticated technical reports similar to ones generated by engineers in this industry.

### **1578E0 AC Advanced Manufacturing IV—Pneumatic Systems for Automation**

This course allows students to apply knowledge of materials to the design for manufacturing necessary to bring a product to market. Students explore the business of manufacturing while creating work cells to process materials into products. Students design a prototype and then redesign with the goal of manufacturing the product. Students analyze and evaluate all aspects of the design and production process with an emphasis on lean, green manufacturing. Students pay special attention to the control systems integration, data acquisition, and quality control processes necessary for Six Sigma production.

### **1765E0 Industrial and Commercial Wiring**

This course introduces the student to the knowledge base and technical skills for Industrial and Commercial Wiring. Areas of study include conduit and raceways and commercial load calculations and configurations. Emphasis will be placed on career exploration, job seeking skills and personal and professional ethics.

### **1807E0 Industrial Electricity**

This course will introduce students to the application of basic electrical theory, electrical symbols, interpretation of electrical diagrams, and proper connection and control methods for common types of electrical motors utilized in industrial environments. The primary focus of this course includes: electrical distribution systems, electrical transformers, AC and DC motor theory, operation and

repair, motor testing and sizing procedures, manual and magnetic starters, and motor overload protection. Specific topics will include types of electrical distribution systems, transformer theory and operation, electrical safety related to motor systems, lockout/ tag out techniques, use of motor testing devices, and construction, sizing, and installation of motor overload devices. Extensive laboratory exercises will enhance classroom studies.

## **Nail Technician**

*Human Services (HU)*

### Program of Study Description:

The Nail Technology Program of Study focuses on the knowledge, skills, attitudes and practices required for careers in the field of Nail Technology. This Program of Study is designed for licensure by the State Board of Barbers and Cosmetologists.

Students will utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Students are encouraged to become active members of a student organization. Teachers should provide each student with real world learning opportunities and instruction related to possible occupations. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

### Four Core Course Descriptions:

#### 1716E0 **Nail Technology Science and Procedure**

This course provides knowledge and understanding of infection control specifically for nail technicians; general anatomy and physiology; skin structure and growth; nail structure and growth; nail diseases and disorders; basics of chemistry, nail product chemistry; and electricity as delineated by the WV Board of Barbers and Cosmetology.

#### 1717E0 **Art of Nail Technology**

This course provides the knowledge and skills to perform basic manicures and pedicures; electric filing; wraps; tips; paraffin wax treatments; monomer liquid and polymer powder nail enhancements; UV gels; and creative design as delineated by the WV Board of Barbers and Cosmetologists.

#### 1719E0 **Nail Technology Clinical Experience**

This course provides knowledge and skills as delineated by the WV Board of Barbers and Cosmetologists for the provision of manicures, pedicures, massage, and facials.

#### 1737E0 **Barbers and Cosmetology Foundations**

This course develops knowledge and understanding of fundamental theory and practices of the Cosmetology profession as delineated by the WV Board of Barbers and Cosmetologists.

# Pro-Start Restaurant Management

*Hospitality & Tourism (HO)*

## Program of Study Description:

The ProStart Restaurant Management Program of Study focuses on the skills needed for a successful employment in a restaurant environment, but has applicability for students interested in culinary nutrition, dietary services, and child nutrition services. ProStart curriculum integrates performance-based learning with academics, entrepreneurship, and technology skills to prepare students for successful employment in the 21st Century. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, SkillsUSA or FCCLA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, DECA, FCCLA, or SkillsUSA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

## Four Core Course Descriptions:

### 1013E0 Restaurant and Culinary Foundations

This course focuses on the basic preparation and service of safe food, basic introduction to industry safety standards, basic introduction to restaurant equipment, kitchen essentials in knife skills, stocks and sauces, and communication concepts in the restaurant industry.

### 1014E0 Restaurant Management Essentials

This course is designed to focus management essentials in the restaurant industry, guest service, food production, and career exploration and pursuit.

### 1019E0 Advanced Principles in Food Production

This course is designed to examine advanced food production, nutrition, and cost control. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.

### 1020E0 Restaurant Professional

This course is designed to provide content related global cuisine, sustainability, desserts and baked goods, and marketing.

## Elective Course Descriptions:

### 1015E0 Hospitality Products and Services

This course is designed to research and review career options and qualifications in hospitality services. Students will integrate hospitality skills, food service etiquette, and processes used by many enterprises, including individual and group settings, and food environments into hospitality service. Students will also practice good human relations skills including a good work ethic.

### 1016E0 **Food Service Management Practices**

Management roles and financial responsibilities, staff supervision and training, marketing and advertising, menu planning, food safety, sanitation, labor rules and regulations, and HACCP planning are incorporated in the coursework.

### 1017E0 **Culinary Nutrition and the Menu**

Nutrition basics and the guidelines used for foodservice meal planning are covered in Culinary Nutrition and the Menu. Dietary guidelines and special dietary needs will be used in modifying menu choices.

### 1018E0 **Baking and Pastry Applications**

Baking and Pastry is an elective course which focuses on weights, measures, and general baking, classifications, handling and storage of ingredients, safety and handling, yeast raised dough products, cakes, cookies, batters, breads, biscuits, muffins, pies, and special dessert preparation.

## **Robotics**

*Manufacturing (MA)*

### Program of Study Description:

The Robotics Program of Study focuses on careers that will build a knowledge base and technical skills in industry fields with a robotic component such as an Advanced Manufacturing Technician, Computer-Controlled Machine Tool Operators, or an Electro-Mechanical Technician. The Robotic curriculum follows the intelitek curriculum which includes VEX Programming, Advanced C Programming and Advanced Mechanics. The majority of coursework is taught in an industry setting, providing students with hands-on experience. Students will also be exposed to skills to develop positive work ethics. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of a student organization, SkillsUSA West Virginia. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

### Four Core Course Descriptions:

#### 1866E0 **Robotics REC 1**

REC 1 includes an introduction to Robotics and to VEX programming. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.

#### 1867E0 **Robotics REC 2**

In REC 2, students build and program the BaseBot, then use it to conduct experiments demonstrating physics and mechanical properties, adding sensors and mechanism. REC 1 concludes with a capstone project featuring competitive instructional strategies.

#### 1887E0 **FAA 107 sUAS Ground School**

The sUAS Ground School will consist of all necessary information to pass the written part of the FAA 107 certification exam. This part of the course will consist of the following components:

- The History of Unmanned Aircraft Systems/Drones
- Brief History of UASs, UAS Classification Systems
- Fundamentals of Aero Part 1 – Basic Principles 1

- Basic Rotary Wing Fundamentals – Quad/Multi-copter Aero
- Aviation Weather Principles 1
- Remote Sensing Theory 1 – Remote Sensing Fundamentals
- sUAS Design & Construction 1
- sUAS Design 2 & 3 + Drone Video System
- FAA sUAS Regulations Overview
- Intro to Flight Simulator & Proficiency Expectations
- Flight Simulator Proficiency Demonstration
- Out of the Box and Safely Flying and Controlling Your Drone
- The Know Before You Fly Program
- Applications of UAS Technology

### 1888E0 **FAA 107 Flight School**

After successful completion of the Ground School training the students will progress to the sUAS Flight School. The Flight School will consist of a combination of the 4 major uses for drones in the modern world:

- Commercial and motion picture filmmaking (videography)
- Oil, gas, and mineral exploration (GPS mapping)
- Disaster relief (search and rescue/FEMA documentation)
- Real estate and construction (industrial usage)

## **Welding**

*Manufacturing (MA)*

### Program of Study Description:

The Welding Program of Study focuses on careers that will build a knowledge base and technical skills in all aspects of the Welding industry. Students will have the opportunity to earn both NCCER certification and the WV Welding Certification for each skill set mastered and be exposed to skills to develop positive work ethics.

Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organizations, WV SkillsUSA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

### Four Core Course Descriptions:

#### 1862E0 **Welding I**

This course is designed to introduce the student to the knowledge base and technical skills of the Welding industry. Welding I begins with the NCCER Core curriculum which is a prerequisite to all Level I completions. The students will complete modules in Basic Safety; Introduction to Construction Math; Introduction to Hand Tools; Introduction to Power Tools; Introduction to Construction Drawings; Basic Rigging; Basic Communication Skills; Basic Employability Skills; and Introduction to Materials Handling. Students will then begin developing skill sets in the fundamentals of Welding such as Welding Safety; Oxyfuel Cutting; and Plasma Arc Cutting.

### 1863E0 **Welding II**

Welding II will continue to build student skill sets in areas of Air Carbon Arc Cutting and Gouging; Base Metal Preparation; Weld Quality; SMAW-Equipment and Setup; Shielded Metal Arc Electrodes; SMAW-Beads and Fillet Welds; Joint Fit Up and Alignment; SMAW-Groove Welds with Backing; and SMAW-Open V-Groove Welds.

### 1864E0 **Welding III**

Welding III will continue to build student skill sets in areas of Welding Symbols; Reading Welding Detail Drawings; Physical Characteristics and Mechanical Properties of Metals; Preheating and Postheating of Metals; GMAW and FCAW-Equipment and Filler Metals; and GMAW and FCAW-Plate.

### 1865E0 **Welding IV**

Welding IV will continue to build student skill sets in areas of GTAW-Equipment and Filler Metals; and GTAW-Plate.

### Elective Course Descriptions:

#### 1982E0 **Ornamental Metalwork**

This course introduces the student to the knowledge base and technical skills for concepts in the Ornamental Metal Work. Areas of study include measurement, metal layout and bending, operation of the drill press, band saw, and the iron worker. Incorporated into this course are elements of introductory knowledge and skills necessary for a career in welding. This course is recommended as an Elective in Welding.

*Fine art credit is possible at completion of this course.*

#### 1983E0 **Blueprint Reading and Metallurgy**

The Skill Sets in this course are representative of the basic knowledge included in a Career and Technical Education Welding Program of Study. Areas of study include drawing fundamentals, sketching and fabricating, basic welding symbols, and properties of metals and alloys. This course is recommended as an Elective in the Welding Program of Study.

#### 1987E0 **Gas Metal Arc Welding**

The Skill Sets in this course are representative of the basic knowledge included in a Career and Technical Welding Program of Study. Incorporated into this course are elements of introductory knowledge and skills necessary for a career in welding. This course is recommended as an elective in Metals Technology and Welding.

#### 1989E0 **Gas Tungsten Arc Welding**

The Skill Sets in this course are representative of the basic knowledge included in a Career and Technical Welding Program of Study. Incorporated into this course are elements of introductory knowledge and skills necessary for a career in welding. This course is recommended as an elective in Metals Technology and Welding.

## Vocational Development

Workplace readiness in the 21<sup>st</sup> century demands a dynamic skill set. Basic workplace skills taught during these four classes are based on Safety, Electronic Portfolios, Foods and Nutrition, and Basic Carpentry.

Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organizations, WV SkillsUSA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

### Four Core Course Descriptions:

#### 760300 **Alternate Process/Workplace Skills I**

Safety: Students will learn best practices in safety, sanitation, hygiene, and etiquette.

#### 760500 **Alternate Process/Workplace Skills II**

Electronic Portfolios: Students will learn how to construct a basic electronic portfolio and use computers to complete basic computer tasks.

#### 760600 **Alternate Process/Workplace Skills III**

Foods and Nutrition: Students will learn how to apply basic skills toward food shopping, food preparation, and balancing diets.

#### 760700 **Alternate Process/Workplace Skills IV**

Basic Carpentry: Students will learn basic sawing skills, drilling and assembly skills, as well as finishing skills such as sanding and painting.

### Elective Course Descriptions:

#### 224000 **Custodial Services I**

Custodial services outlines basic duties of a custodian and highlights best practices within the field. Custodial services covers sweeping and vacuuming, trash disposal, basic cleaning, window washing, laundry, dish washing, and organization skills.

#### 225200 **Custodial Services II**

Custodial services outlines basic duties of a custodian and highlights best practices within the field. In conjunction with indoors type tasks, students will also learn outside maintenance duties such as landscaping, planting, and external building maintenance.

#### 765300 **Learning Skills**

Learning skills is a class in basic money management. It has personal finance sections, insurance sections, check writing, bill paying, and credit card sections.

#### 766100 **Test Strategies**

Test strategies covers the basics of taking a formal test. Students are taught how to complete multiple choice exams, and they are taught examples of problem solving skills that can give them an edge in testing. Essay and other types of writing are emphasized to encourage students to develop their writing skills.