PADEN CITY HIGH SCHOOL

CURRICULUM HANDBOOK
AND
PROGRAMS OF STUDY

2019 - 2020

REVISED 8.16.19

ADVANCED PLACEMENT COURSES

In addition to AP Art, Paden City High School will offer additional AP courses via virtual schools. Classes offered will be determined by student request and teacher recommendation. Individual student ability, aptitude and completion of prerequisite courses will be considered before permitting students to enroll in an AP course. AP Course taught at PCHS is described in the appropriate subject area.

DRIVER EDUCATION

DRIVER EDUCATION 6811

Driver Education is designed to expose students to subject matter that could potentially make driving a safer experience for them as well as others who will share the road with them. Information dealing with laws, insurance, map reading and basic vehicle maintenance will be discussed. In compliance with state law, the student will complete six hours of actual roadway driving. Classroom assignments and driving experience will help prepare the students for their driver's permit test.

Prerequisite: Students must be 15 years of age by the first day of the semester in which they are enrolled in a driver's education class.

DUAL CREDIT COURSES
ENGLISH-12th GRADE
US HISTORY-11th GRADE
PSYCHOLOGY
SOCIOLOGY

ENGLISH LANGUAGE ARTS

ENGLISH LANGUARE ARTS 9 4009

Ninth grade Reading and English Language Arts 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 communication. 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 literacy skills and strategies will be utilized across the curriculum. The West Virginia Standards for 21st Century Learning include the following components: 21st Century Content Standards and Objectives and 21st Century Learning Skills and Technology Tools. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and content standards and objectives.

ENGLISH LANGUARE ARTS 10 4010

Reading and English Language Arts tenth grade 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. Tenth graders will become more adept at making connections and transferring knowledge to new situations through research and writing. The West Virginia Standards for 21st Century Learning include the following components: 21st Century Content Standards and Objectives and 21st Century Learning Skills and Technology Tools. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and content standards and objectives.

ENGLISH LANGUARE ARTS 11 4011

Reading and English Language Arts eleventh grade students will refine and enhance foundational literary and information and communication skills through academic rigor and depth. School-to-career experiences, including college entrance exam preparation and the ability to think, speak and write logically in the workplace will become primary focus. Challenging research and writing skills will be emphasized across the curriculum. 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. The West Virginia Standards for 21st Century Learning include the following components: 21st Century

Content Standards and Objectives and 21st Century Learning Skills and Technology Tools. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and content standards and objectives.

English Language 12: *ENG LA 12 401200*
1 credit/2semesters
English Language Arts twelfth grade students are College and Career Ready. They make connections, transfer knowledge to new situations through research and writing, and understand the value of literacy-rich environments. They set clear goals, deadlines and individual roles to promote civil, democratic discussions that probe reasoning, evidence and divergent and creative thinking. They use research to make informed decisions and solve problems independently. They analyze and articulate the value of and take responsibility for their learning. They focus on reading, writing, speaking, listening and the conventions of language across curriculums in educational endeavors and collaborative learning situations including complex, critical analysis and evaluation of how texts and ideas interact as well as how and why author's craft impacts the quality and aesthetic value of texts. They initiate and facilitate inquiry based, engaging endeavors and understands that this is the foundation for lifelong learning. Complex analysis of a broad array of quality literary and informational texts of appropriate complexity, with increasing emphasis on informational text, creates independent and proficient readers and communicators who convey a clear and distinct perspective and address alternative or opposing perspectives with diverse audiences. Students use technology to develop and strengthen writing in response to ongoing feedback, including new arguments or information and recognize the benefit of the sustained writing process. With increased emphasis on informational/explanatory and argumentative writing, they use the writing process and the conventions of language to compose logical arguments and explanations using rhetorical devices, varied syntax and relevant evidence anticipating the audience's values and biases. Through academic rigor and relevance, the ability to evaluate, speak and write logically, clearly and distinctly are evident. They effectively evaluate and use multiple sources following standard format for citation in sustained research projects that include the premises, purposes and arguments in works of public advocacy. The 21st Century student adeptly employs technology best suited to audience, task, purpose and discipline. Using higher order thinking skills, communication skills and independent and creative thinking, students effectively build content knowledge.

OR

Transition English Language Arts for Seniors: *TRNS E/LA SR 401300*
1 credit/2semesters
This course may be required for those not meeting benchmark on the COMPASS test. English Language Arts twelfth grade students are College and Career Ready. They make connections, transfer knowledge to new situations through research and writing, and understand the value of literacy-rich environments. They set clear goals, deadlines and individual roles to promote civil, democratic discussions that probe reasoning, evidence and divergent and creative thinking. They use research to make informed decisions and solve problems independently. They analyze and articulate the value of and take responsibility for their learning. They focus on reading, writing, speaking, listening and the conventions of language across curriculums in educational endeavors and collaborative learning situations including complex, critical analysis

and evaluation of how texts and ideas interact as well as how and why author's craft impacts the
quality and aesthetic value of texts. They initiate and facilitate inquiry based, engaging endeavors and understands that this is the foundation for lifelong learning. Complex analysis of a broad array of quality literary and informational texts of appropriate complexity, with increasing emphasis on informational text, creates independent and proficient readers and communicators who convey a clear and distinct perspective and address alternative or opposing perspectives with diverse audiences. Students use technology to develop and strengthen writing in response to ongoing feedback, including new arguments or information and recognize the benefit of the sustained writing process. With increased emphasis on informational/explanatory and argumentative writing, they use the writing process and the conventions of language to compose logical arguments and explanations using rhetorical devices, varied syntax and relevant evidence anticipating the audience's values and biases. Through academic rigor and relevance, the ability to evaluate, speak and write logically, clearly and distinctly are evident. They effectively evaluate and use multiple sources following standard format for citation in sustained research projects that include the premises, purposes and arguments in works of public advocacy. The 21st Century student adeptly employs technology best suited to audience, task, purpose and discipline. Using higher order thinking skills, communication skills and independent and creative thinking, students effectively build content knowledge.

OR

College English: *COLLEGE ENGLISH 40120X*
1 credit/2semesters

A college freshman level composition courses through WVNCC and taught at Magnolia High School. Part of this course will be online and part will be with current staff. Students must have qualifying scores on the ACT or ACCUPLACER. The required scores are ACT: Reading 17 and English 18. The ACCUPLACER test will be administered on site and a score given immediately. The cost of this course is $25 per credit hour. English Language Arts twelfth grade students are College and Career Ready. They make connections, transfer knowledge to new situations through research and writing, and understand the value of literacy-rich environments. They set clear goals, deadlines and individual roles to promote civil, democratic discussions that probe reasoning, evidence and divergent and creative thinking. They use research to make informed decisions and solve problems independently. They analyze and articulate the value of and take responsibility for their learning. They focus on reading, writing, speaking, listening and the conventions of language across curriculums in educational endeavors and collaborative learning situations including complex, critical analysis and evaluation of how texts and ideas interact as well as how and why author's craft impacts the quality and aesthetic value of texts. They initiate and facilitate inquiry based, engaging endeavors and understands that this is the foundation for lifelong learning. Complex analysis of a broad array of quality literary and informational texts of appropriate complexity, with increasing emphasis on informational text, creates independent and proficient readers and communicators who convey a clear and distinct perspective and address alternative or opposing perspectives with diverse audiences. Students use technology to develop and strengthen writing in response to ongoing feedback, including new arguments or information and recognize the benefit of the sustained writing process. With increased emphasis on informational/explanatory and argumentative writing, they use the writing

process and the conventions of language to compose logical arguments and explanations using rhetorical devices, varied syntax and relevant evidence anticipating the audience's values and biases. Through academic rigor and relevance, the ability to evaluate, speak and write logically, clearly and distinctly are evident. They effectively evaluate and use multiple sources following standard format for citation in sustained research projects that include the premises, purposes and arguments in works of public advocacy.

YEARBOOK 4071

This course will introduce students to a variety of communication tools and resources. Students will explore various applications in desktop publishing through hands-on activities while preparing the yearbook for publication.

FINE AND PERFORMING ARTS

ART I – IV 3211, 3212, 3213, 3214

These levels of study emphasize the elements and principles of design. Exercises are planned to encourage development, understanding and ability. Fundamental techniques of drawing, painting, sculpture and printmaking are explored. Student work will be analyzed and critiqued. General Art III-IV involve higher levels of thinking and problem solving. Art appreciation will be introduced at all levels and a field trip to a museum is offered each semester. Students will also learn an art criticism process. All students are expected to produce a sketch book.

PAINTING 3367

Painting students will develop their technical and compositional skills by using a wide range of painting media. The emphasis will be on developing technical painting skills in watercolor, tempera, and acrylic. Students will learn about the history of art, and create a variety of paintings inspired by different art movements and styles. Students will learn how to paint from observation and how to create a successful composition. Students will also keep a sketchbook or a visual/verbal journal throughout the year. Students will explore a variety of traditional and non-traditional subject matter such as still life, landscape and portraits and will incorporate personal ideas, taste and styles. Students will continue to develop their compositional understanding by applying the Elements and Principles of Design to their sketches, underdrawings and final paintings.

CERAMICS/POTTERY 3307

This class will introduce students to building with clay. Emphasis will be placed on the design elements; line, shape, texture, and color. Focus will be on the hand building techniques; pinch, coil and slabs. Functional as well as sculptural applications will be explored. Introduction to traditional and historical ceramic arts will be incorporated into the lab experiences. Students will be introduced to the craft of wheel thrown pottery on a limited basis. Various glaze and decoration techniques for finishing work will be introduced in the beginning class.

BAND I-IV 3611, 3612, 3613, 3614

MARCHING BAND – FALL

The marching band is designed to teach students the advanced techniques of playing a musical instrument. The student will learn the mental and physical coordination of playing music while marching. Performances are geared to competition and football half-time shows. Before the conclusion of the marching season, band members prepare concert band selections for various performances.

CONCERT BAND-SPRING

Concert band is centered more in the classroom and emphasizes musical transcriptions written by the masters and works written primarily for concert band performances. Both semesters are geared toward understanding music, developing an appreciation for the beauty of musical selections and the enjoyment of performing.

CHORUS I-IV 3621, 3622, 3623, 3624

The chorus curriculum will be based on goals and learning outcomes taken from state and county manuals on vocal music. Emphasis will be on strengthening vocal abilities by learning different styles of music including modern. Students will be challenged to develop music awareness and learn through co-operative methods.

Chorus will perform on various fronts including public performances and concerts in winter and spring, graduation and other events as time/funding permit.

PIANO I/II 3681, 3682

Piano I/II are designed to teach the concepts and fundamentals needed to perform on the piano. It will increase musical understanding beyond just reading notes by teaching students a vocabulary of chords and keys, accompaniment patterns, and improvisational techniques. Students will play melodies in several positions and have the opportunity to participate in ensemble playing. Students will develop good practice habits, and learn techniques to increase the muscular agility and flexibility of their hands. We will delve into music at its source, find out how music is constructed, and discover the composers and history behind the music.

Upon completion of this course, the student will have learned to play some of the standards of piano repertoire while gaining a thorough understanding of the history and basic concepts of music.

GUITAR I/II 3726, 3727

BEGINNING GUITAR LEVEL 1
This one-year course is designed for students with no previous guitar experience. Students will receive guidance and direction in solving problems related to playing the guitar at a beginning level and will learn many of the different styles, skills and techniques required to become a successful guitarist. Areas of concentration include: correct posture, note reading, aural skills, flat-picking, singing songs, rhythmic patterns, chord study, finger-picking styles, musical forms, improvisation and performing experiences.

Course Goals:
1. To develop correct posture and hand position
2. To identify the parts of the guitar
3. To demonstrate the proper tuning of the guitar by pitch matching
4. To understand the history and origin of the guitar
5. To learn basic fundamentals of musical notation
6. To learn basic chords and single notes in first position
7. To learn proper strumming, finger style and flat picking techniques and accompaniments
8. To become aware of career opportunities
9. To participate in performance and evaluation of music
10. To demonstrate basic notating skills

Backward Assessment Model
Level 1 – Beginning Guitar
YEAR ONE – At the completion of year one, students will be able to:
1. perform using correct sitting posture and appropriate hand positions
2. play a sixteen measure melody composed with eighth notes at a moderate tempo using alternate picking
3. play on all six strings in first position

4. play melodies in the keys C, Am, G, Em, D, Bm, F and Dm
5. have a tonal range which extends to the A above the staff
6. play major, minor and dominant seventh chords in first position in the keys of C, G, D, A, Am, E, & Em
7. strum rhythms to include whole, half, quarter and eighth notes including simple syncopation
8. play power chords using roots on open sixth, fifth and fourth strings
9. read and understand symbols indicating up and down strokes
10. play arpeggios in a finger-picking style as an accompaniment
11. identify and use p-i-m-a
12. identify and name the parts of the guitar
13. identify basic musical symbols
14. tune the guitar by pitch matching

Level II-Students who have a basic level of guitar skill play a range of parts (according to level of ability) that when combined, create a cohesive whole, as in an orchestra. Moving beyond unison chords, students will learn to play single line melodies and two or more notes simultaneously, in addition to broken or block chords. Students also sharpen their listening and collaboration skills. The class takes up different genres – classical, folk, rock, jazz – over the course of the year.

FOREIGN LANGUAGE

SPANISH I 5661V0

Spanish I will enable students to obtain a measurable degree of communicative competency and proficiency in each of the four language skills: speaking, reading, writing and listening. Students are introduced to the language in a stimulating context, which results in the understanding of most routine questions, statements and commands, as well as everyday conversations on non-technical subjects. Current, historical and cultural aspects about the Spanish-speaking world are presented.

SPANISH II 5662V0

In Spanish II, students continue to develop language proficiency, preparing them to communicate effectively and express themselves with confidence. High interest topics and chapter themes motivate students and complete grammar support lays a foundation for proficiency. Presentation and practice of functional expressions, vocabulary and grammar are interwoven with cultural information.

MATHEMATICS

9th GRADE MATH

CCR Algebra I *CCR ALG I 306100*
Advanced Academics CCR Algebra I *AA CCR ALG I 30610H*
1 credit/2 semesters
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. 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.

CCR Algebra Support: *CCR ALG SUP 306000*
1 credit/2 semesters
(aka Math 180)

10th GRADE MATH

CCR Geometry: *CCR GEOMETRY 306200*
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. 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.

11th GRADE MATH

CCR Algebra II: *CCR ALG II 306300*
1 credit/2 semesters
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. 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, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. Students will continue developing mathematical proficiency

in a developmentally-appropriate progressions of standards. 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.

OR

AA CCR Trigonometry/Pre-Calculus: *CCR TRIG/PRECAL 30640H*
1 credit/2 semesters
Students in this course will generalize and abstract learning accumulated through previous courses 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 by considering compositions and inverses. Students will expand their work with trigonometric functions and their inverses and complete the study of the conic sections begun in previous courses. They will enhance their understanding of probability by considering probability distributions and have previous experiences with series augmented. Students will continue developing mathematical proficiency in a developmentally-appropriate progressions of standards. 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.

AND

AA Advanced Mathematical Modeling: *ADV MATH MDLG 30250H*
1 credit/2 semesters
Primary focal points of Advanced Mathematical Modeling include 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. Students will learn to become critical consumers of the quantitative data that surround them every day, knowledgeable decision makers who use logical reasoning and mathematical thinkers who can use their quantitative skills to solve problems related to a wide range of situations. As students solve problems in various applied situations, they will develop critical skills for success in college and careers, including investigation, research, collaboration and both written and oral communication of their work. As students work with these topics, they will rely on mathematical processes, including problem-solving techniques, appropriate mathematical language and communication skills, connections within and outside mathematics and reasoning. Students will use multiple representations, technology, applications and modeling and numerical fluency in problem-solving contexts. 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.

12th GRADE MATH

CCR Trigonometry/Pre-Calculus: *CCR TRIG/PRECAL 306400*
1 credit/2 semesters
Students in this course will generalize and abstract learning accumulated through previous courses 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 by considering compositions and inverses. Students will expand their work with trigonometric functions and their inverses and complete the study of the conic sections begun in previous courses. They will enhance their understanding of probability by considering probability distributions and have previous experiences with series augmented. Students will continue developing mathematical proficiency in a developmentally-appropriate progressions of standards. 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.

OR

Advanced Mathematical Modeling: *ADV MATH MDLG 302500*
1 credit/2 semesters
Primary focal points of Advanced Mathematical Modeling include 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. Students will learn to become critical consumers of the quantitative data that surround them every day, knowledgeable decision makers who use logical reasoning and mathematical thinkers who can use their quantitative skills to solve problems related to a wide range of situations. As students solve problems in various applied situations, they will develop critical skills for success in college and careers, including investigation, research, collaboration and both written and oral communication of their work. As students work with these topics, they will rely on mathematical processes, including problem-solving techniques, appropriate mathematical language and communication skills, connections within and outside mathematics and reasoning. Students will use multiple representations, technology, applications and modeling and numerical fluency in problem-solving contexts. 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.

OR

Calculus (AB) Advanced Placement: *AP CALC AB 303100*
1 credit/2 semesters
Students will deepen and extend their understanding of functions, continuity, limits, differentiation, applications of derivatives, integrals, and applications of integration. Students will apply the Rule of Four (Numerical, Analytical, Graphical and Verbal) throughout the course and use available technology to enhance learning. Student will use graphing utilities to investigate concepts and to evaluate derivatives and integrals. 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.

OR

Transition Math for Seniors: *TRANS MATH SRS 305200*
1 credit/2 semesters
(aka Math Ready)
Transition Mathematics for Seniors prepares students for their entry-level credit-bearing liberal studies mathematics course at the post-secondary level. Students 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. 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.

Note: Additional course options are not limited to AP Calculus, AP Statistics, AP Computer Science, Advanced Mathematical Modeling, STEM Readiness Mathematics, Transition Math for Seniors and Math IV.

ADVANCED MATH MODELING 3025

Students continue to build upon their algebra and geometry foundations and expand their understanding through further mathematical experiences. The primary focal points of Advanced Mathematical Modeling include 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. Students learn to become critical consumers of the quantitative data that surround them every day, knowledgeable decision makers who use logical reasoning and mathematical thinkers who can use their quantitative skills to solve problems related to a wide range of situations. As they solve problems in various applied situations, they develop critical skills for success in college and careers, including investigation, research, collaboration and both written and oral communication of their work. As students work with these topics, they continually rely on mathematical processes, including problem-solving techniques, appropriate mathematical language and communication skills, connections within and outside mathematics and reasoning. Students also use multiple representations, technology, applications and modeling and numerical fluency in problem-solving contexts.

TRANSITION MATH 3052

This course prepares students to enter an entry level mathematics course at a post-secondary school. Students will enhance their knowledge of numeral and problem solving skills with the fundamental concepts of algebra, geometry and introductory trigonometry.

PHYSICAL EDUCATION/HEALTH

PHYSICAL EDUCATION 9-10 660990

Physical Education provides students with the opportunity to participate on a daily basis in a structured physical education program. A variety of team and individual sports will be covered as well as a personal conditioning program. Grades will be based on changing clothing daily and the student's participation to the best of their ability.

HEALTH 9-10 690910

The health curriculum offers a basic understanding of the structures and functions of the human body and addresses personal health and hygiene. It is designed to give the students an understanding of heredity and the environment. Students will become aware of communicable diseases and their effects on society. Other topics such as nutrition and first aid will be dealt with as well as possible health careers. Grades will be calculated using homework, test scores and class participation.

SCIENCE

EARTH AND SPACE SCIENCE- 9th GRADE 6201

The ninth grade Earth and Space Science (ESS) course builds upon science concepts from middle school by revealing the complexity of Earth's interacting systems, evaluating and using current data to explain Earth's place in the universe and enabling students to relate Earth Science to many aspect 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. The objectives strongly reflect the many societally relevant aspects of ESS (resources, hazards, environmental impacts) with an emphasis on using engineering and technology concepts to design solutions to challenges facing human society. Engineering, Technology, and the Application of Science objectives are integrated throughout instruction as students define

BIOLOGY-10th GRADE 6021

The objectives of Biology are to expand the knowledge base of students in biology and to prepare students for college level science. In addition, study skills and character education are strongly emphasized. Students will be exposed to basic principles and themes in each topic through an integrated approach. This approach is based on the belief that there are different learning styles for each individual. Hands-on activities in the laboratory are designed to enhance the classroom experience of both auditory and visual learners. By catering to different learning styles, students will be successful in learning the concepts presented in this course.

CHEMISTRY-11th or 12th GRADE 6302

Chemistry is the advanced study of matter, its composition and its changes. The course builds on the foundation developed in Physical Science. Students will gain an understanding of atomic structure, unit analysis, stoichiometry, role of electrons, chemical reactions, gases and trends of the periodic table. Chemistry is designed to prepare students for college level Chemistry and requires a solid mathematical base. Students will engage in active inquiries, investigations and hands-on activities 50% of the time. Students will develop research/laboratory skills. Safety instruction is integrated into all activities.

OR

HUMAN ANATOMY AND PHYSIOLOGY-11th or 12th GRADE 6103

This upper level course is designed for students who have completed Physical Science and Biology with a "C" or above and plan to attend college or technical school in a health related

field. Human Anatomy and Physiology is an advanced course that is an elective designed for those students wanting a deeper understanding of the structure and function of the human body. The body will be viewed as a whole using anatomical terminology necessary to describe location. Focus 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. This course will develop 21st century skills and be appropriate for college bound students as well as those choosing a health services career cluster. Students will engage in active inquiries, investigation, and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and research/laboratory skills as they evaluate the academic requirements and prepare for occupational opportunities in health and medical fields. Safety instruction is integrated into all activities. The West Virginia Standards for 21st Century Learning include the following components: 21st Century Content Standards and Objectives and 21st Century Learning Skills and Technology Tools. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and content standards and objectives.

OR

Environmental Science: *ENVIRO SCI 631200*

1 credit/2semesters

Environmental Science is an advanced, high school elective course which builds on foundational knowledge of the chemical, physical, biological, geological processes and focuses on the natural world. Through an inquiry-based program of study, all students will demonstrate environmental literacy as they explore the economic, social, political, and ecological interdependence in urban and rural areas and on local and global scales. As students fuse experiences across disciplines, they will acquire knowledge, values, and skills needed to protect and improve the environment. There is a focus on several crosscutting concepts including the following: Cause and Effect, Systems and System Models, Energy and Matter, and Stability and Change. Science practices and Engineering, Technology, and the Application of Science objectives are integrated as students ask questions and define problems, develop and use models, plan and conduct investigations, analyze and interpret data, and construct explanations and design 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.

OR

Forensic Science: *FORENSIC SCIENCE 604400*

1 credit/2 semesters

Forensic Science is an advanced, high school elective course designed to provide students with hands-on experiences in various aspects of a criminal investigation. Science content and

Engineering, Technology, and the Application of Science objectives are integrated as students ask questions and 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. As students demonstrate proficiency in evidence collection--maintenance of data integrity, formulation of a conclusion/summary, and succinct communication of findings--they prepare for forensic-related careers and other occupational opportunities in science, technology, engineering, and math. 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.

SOCIAL STUDIES

WORLD HISTORY-9th GRADE 7010

This is the foundation course on which the subsequent social studies courses are built. World History emphasizes the historical, economic, geographic, political and social structure of various cultural regions of the world beginning with the dawn of civilization and ending with the period of the western world's exploration and conquest.

US TO 1900-10th GRADE 7009

The second year of study encompasses a concentrated study of the United States from its inception to its emergence into world affairs. This is a transitional course between *The World to The Age of Exploration and the United States and the World: The 20th Century.* A review of the Renaissance and Reformation as a stimulus for western expansion introduces the year of study and is followed by the age of exploration. As the course develops, social studies concepts such as colonialism, imperialism and nationalism are common threads to understanding that the unfolding of chronological events is, in fact, a study in cause and effect. The transitional year concludes with the Industrial Revolution as a stimulus for imperialism and sets the stage for the emergence of the United States as a world power.

US STUDIES-COMPREHENSIVE-11th GRADE 7012

The capstone course for the three-year plan of study provides students with an understanding of the major events and people that have shaped the world in which they live. A chronological review of these events and people provides students with a framework to examine political, economic and technological changes which have occurred during this century. Additionally,

students will use geographic concepts to see how man has been shaped by his environment. Students will demonstrate an understanding of the interdependency of the United States within the affairs of the world. The course concludes with students evaluating current world concerns and suggesting ideas dealing with those concerns.

CIVICS-12th GRADE 7031

This course will emphasize a study of government and individual rights and responsibilities. Examination of rules, laws and the need for authority is crucial to maintaining a safe society for diverse individuals and groups. Civic understanding increases as students develop the skills to make informed decisions, to resolve conflicts peacefully, to articulate and defend positions and to engage in the civic and political life of their communities.

PSYCHOLOGY-12th GRADE ELECTIVE DUAL CREDIT 7321

This course covers core concepts in psychology beginning with the use of the scientific method in research and the physiological basis for behavior. Topics covered in the first semester include social psychology, perception, states of consciousness, memory and learning. During the second semester the focus is on human growth and development, personality, stress and adjustment, and ends with a unit on abnormal behavior, treatments, and therapy. Class time is divided between lecture, films, discussions, experiments, and demonstrations. During the first semester, students take frequent unit tests, design, implement, and write a report on a social psychology experiment, write a paper on a movie selected by the instructor, and create a dream log with dream analysis and critique of that analysis. Second semester, students take frequent unit tests, read a book on which a paper is assigned, write a seven-page research paper, and construct a personal time-line.

CTE COURSES

If you enroll in a CTE course either at Paden City High School or MOVTI you will be subject to the simulated workplace protocols as listed below.

Simulated Workplace Protocols
The overall structure of the Simulated Workplace initiative is governed by a set of protocols to assure consistency and quality in the local implementation of the concept. These protocols include the following requirements:
CTE programs will:

1. Transform the classroom environment into a replicated company;
2. Utilize time clocks or some other form of formal attendance recording process;
3. Drug test all students enrolled in a CTE course at the beginning of the school year;
4. Adhere to the county developed Random Drug Testing Policy, while testing a minimum of 40% of all students enrolled within a Simulated Workplace classroom (where applicable for safety);
5. Conduct an application / interview process for enrolling students;
6. Develop a company name and procedures / protocol manual;
7. Ensure all students receive quality safety training;
8. conduct a 5-10 minute company meeting daily or weekly;
9. Submit Quarterly and Annual reports developed by students and instructor;
10. Establish work teams and an organizational system with students rotating across teams;
11. Integrate the 5S Continuous Quality Improvement principles;
12. Participate in Business and Industry yearly onsite evaluations; and
13. Utilize a portfolio system for students to document learning, credentials earned, projects completed, etc.

CTE AT PCHS

Science, Technology, Engineering & Mathematics

ST 2205 Innovations in Science and Technology (Advanced Career)
Required Courses
1545 AC Innovations in Science and Technology I
1546 AC Innovations in Science and Technology II
1547 AC Innovation in Science and Technology III
1548 AC Innovation in Science and Technology IV

AC Innovations in Science and Technology I: *AC IN SCI TECH I 154500*

1 credit/2 semesters
This is a contextual-based course that introduces students to the core fundamental concepts of science and technology through authentic projects. Through these projects, students will develop an understanding of the relationship between the physical, biological and social world. Students will gain an understanding of the differences between science and technology, and learn that technology is a process for applying science. Students will develop a deeper understanding of scientific inquiry and the engineering design process when solving real-world problems. Students will experience the interaction of science, technology, engineering, math and literacy through a problem-based learning environment. Finally, the process will require students to use mathematics to analyze costs, develop budgets and make precise measurements to successfully implement project goals.

AC Innovations in Science and Technology II: *AC IN SCI TECH II 154600*
1 credit/2 semesters
This course uses the concepts learned from Course 1 to further develop students' problem-solving strategies and skills needed by the 21st-century workforce. Students will continue to explore emerging technologies and techniques in the context of addressing authentic projects. Key concepts introduced in this course include sustainability and environmental trends, systems thinking, and trend analysis and prediction. Through engagement, students will experience the necessary connection between literacy, mathematics and science in a variety of hands-on, real world projects requiring them to apply academic and technical concepts and skills and technology to complete.

AC Innovations in Science and Technology III: *AC IN SCI TECH III 154700*
1 credit/2 semesters
This course will examine the past, present and future impact of science and technology on culture, society and the environment. Students will explore how their predecessors worked to solve some problems that still exist today, and examine the potential of using modern technology to solve those problems. From these explorations, students will engage in a variety of hands-on design projects that will address tradeoffs, optimization, interconnectivity and the nature of complex systems.

AC Innovations in Science and Technology IV: *AC IN SCI TECH IV 154800*
1 credit/2 semesters
This course will allow students to brainstorm, use invention, innovation, creativity, predictive analysis and use technology to solve real-world problems. Dimensions covered will include research and development, troubleshooting, experimentation, design failures, patents and trademarks, and design under constraints.

BM1465 MANAGEMENT AND ADMINISTRATIVE SUPPORT

The Administrative Support Pathway facilitates business operations through a variety of administrative and clerical duties including information and communication management, data processing collection and project tracking.

BUSINESS AND MARKETING ESSENTIALS 1439

This course is designed to develop student understanding and skills in such areas as business law, communication skills, customer relations, economics, emotional intelligence, financial analysis, human resources management, information management, marketing, operations, professional development and strategic management. Students acquire knowledge of fundamental business activities and factors affecting business, develop verbal and written communication skills, use information literacy skills, utilize job-seeking strategies and participate in career planning. 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.

BUSINESS COMPUTER APP I MS WORD & MS POWERPOINT 1411

This course is designed to develop student understanding and skills in such areas as applying integrated software to business applications, word processing, spreadsheets, presentations, database applications, Internet, and/or personal information programs. 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. The West Virginia Standards for Global 21 Learning include the following components: Global 21 Content, Literacy and Numeracy, Entrepreneurship, and Technology Standards. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and content standards and objectives.

MANAGEMENT AND ENTREPRENEURSHIP 1445

This course is designed to develop student understanding and skills in such areas as the elements of management and entrepreneurship knowledge and skills necessary for a career in the business and marketing field. 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.

OFFICE MANAGEMENT 1449

This area of study is designed to aid students in becoming skillful in the operation of an office. Major instructional areas include personal development and employability skills, managing records, processing mail, communication duties, keeping financial records, applying computing, accounting, and data skills, processing business correspondence, operating office equipment, using management skills and completing office support activities. Students will 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 business opportunities. Students are encouraged to become active members of the student organizations FBLA or DECA. The West Virginia Standards for 21st Century Learning include the following components: 21st Century Content Standards and 21st Century Learning Skills and Technology Tools. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and content standards and objectives.

HOSPITALITY AND TOURISM

Cluster Description:

The Hospitality & Tourism Cluster prepares students for careers in the management, marketing and operations of restaurants and other food services, lodging, attractions, recreational events and travel-related services.

Restaurants and Food/Beverage Services Pathway

Pathway Description: The restaurants and food and beverage services pathway includes workers who perform a variety of tasks to maintain operations and promote guest services in eating and drinking establishments. These operations may be in the business or nonprofit sectors.

Program of Study: HO1015 Baking and Pastry

Courses: 1013 Restaurant and Culinary Foundations

1024 Baking and Pastry I

1025 Baking and Pastry II

1026 Baking and Pastry Advanced

Program of Study Description:

The Baking and Pastry prepares students for various aspects of baking and pastry. Students will start with the very basics of the industry such as how ingredients work together in order for them to make a commercial, sellable product. Other content includes various breads, cookies, pies, cakes, tortes, plated desserts, chocolate and sugar work. This course will help prepare students for either going into a baking and pastry program at a culinary school or work in a bakery right after graduation.

Course Descriptions:

1013 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. 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.

1024 Baking and Pastry I

This course will educate students on the basics of the industry. This course starts with teaching students about the various ingredients used for baking and pastry arts and how these

ingredients react to each other to make products. It will also instruct students on various breads such as quick breads, artisan and yeast breads, and laminated doughs. Students utilize 4 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.

1025 Baking and Pastry II

This course will instruct students on how to make cookies, pies, and cakes. It educates students about the various types of icings and frostings and introduces them to custards, sauces, and creams. This course also teaches students how to make ice cream and gives them some knowledge of how to adapt recipes to meet special dietary needs. Students utilize problemsolving 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.

1026 Baking and Pastry Advanced

This course will educate students on how to make some of the more intricate products of the industry. It will introduce students to tortes and specialty cakes, petits fours, and plated desserts. This course also will give students some experience with chocolate and sugar work. 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.

*****NOT ALL COURSES ARE OFFERED THIS SCHOOL YEAR. CLASSES ARE OFFERED IN THE MASTER SCHEDULE BASED UPON ENROLLMENT, STUDENT NEED, GRADUATION REQUIREMENT, ETC. CLASSES THAT ARE LISTED, BUT NOT OFFERED THIS YEAR, MAY BE OFFERED NEXT YEAR.

MID-OHIO VALLEY TECHNICAL INSTUTITUDE
PROGRAMS OF STUDY

Transportation, Distribution & Logistics

TR 1620 Automotive Technology

Required Courses:

1631 MLR-1
1623 MLR-2
1625 MLR-3
1637 MLR-4

Electives:

1629 AST-1
1633 AST-2
1635 AST-3
1627 AST-4

Automotive Technology MLR-1: *AUTO-TECH MLR1 163100*

1 credit/1 semester

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

Automotive Technology MLR-2: *AUTO-TECH MLR2 162300*

1 credit/1 semester

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, BrakesDiagnosis and Repair of Miscellaneous Automotive Items, Brakes-Diagnosis and Repair of Antilock Brake Systems and Steering and Suspension-Diagnosis of Steering & Suspension Systems, 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.

Automotive Technology MLR-3: *AUTO-TECH MLR3 162500*

1 credit/1 semester

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. 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.

Automotive Technology MLR-4: *AUTO-TECH MLR4 163700*

1 credit/1 semester

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. 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 5 student organization, WV SkillsUSA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

Automotive Technology AST-1: *AUTO-TECH AST1 162900*

1 credit/1 semester

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; NAFTC Program or Additional electrical Tasks from NATEF MAST Program. This course is recommended as an Elective in Automotive Technology.

Automotive Technology AST-2: *AUTO-TECH AST2 163300*

1 credit/1 semester

The Skill Sets in Automotive Technology AST-2 will concentrate on the skills sets related to Steering and Suspension; and Brakes. This course is recommended as an Elective in Automotive Technology.

Automotive Technology AST-3: *AUTO-TECH AST3 163500*

1 credit/1 semester

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. This course is recommended as an Elective in Automotive Technology.

Automotive Technology AST-4: *AUTO-TECH AST4 162700*

1 credit/1 semester

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. This course is recommended as an Elective in Automotive Technology

TR 1740 Diesel Equipment Technology
Required Courses:
1751 Fundamentals of Diesel Equipment Technology
1741 Diesel Engine Components
1747 Diesel Support Systems
1744 Electronic Engine Controls

Electives:
1743 Diesel Engine Tune Up & Trouble Shooting
1742 Diesel Equipment Electrical Systems
1745 Diesel Preventive Maintenance & Inspection
1749 Diesel Truck Chassis Concepts

Fundamentals of Diesel Equipment Technology: *DSLEQ-FUND 175100*
1 credit/1 semester
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. 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.

Diesel Engine Components: *DSLEQ-CMPNT 174100*
1 credit/1 semester
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. 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.

Diesel Support Systems: *DSLEQ-SPPRT 174700*
1 credit/1 semester
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. 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 8 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.

Electronic Engine Controls: *DSLEQ-ELEC CON 174400*
1 credit/1 semester
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. 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.

Diesel Equipment Electrical Systems: *DSLEQMT ELE SYS 174200*
1 credit/1 semester
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. This course is recommended as an Elective in Diesel Equipment Technology.

Diesel Preventive Maintenance and Inspection: *DSLEQMT MAINT 174500*
1 credit/1 semester
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, 22 frame and chassis maintenance. This course is recommended as an Elective in Diesel Equipment Technology.

Diesel Truck Chassis Concepts: *DSLEQMT TRUCK 174900*
1 credit/1 semester
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. This course is recommended as an Elective in Diesel Equipment Technology.

Diesel Engine Tune Up & Trouble Shooting: *DSLEQMT TUP/TS 174300*
1 credit/1 semester
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. This course is recommended as an Elective in Diesel Equipment Technology.

Agriculture, Food & Natural Resources

AG 2185 Chemical, Energy & Mechanical Technologies
Required
2497 Basic Production Mechanics
2450 Fundamentals of Energy Systems
2496 Advanced Production Mechanics
2449 Chemical Process Control

Basic Production Mechanics: *BASIC PROC MECH 249700*
1 credit/1 semester
This is a core course for the Oil and Gas Extraction and Distribution concentration that builds a knowledge base and technical skills in the mechanical aspects of the industry. Topics include: NCCER Core, Masonry, Fasteners, Tubing and Threaded Pipe, Electrical systems, and welding. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members in the appropriate CTSO. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

Fundamentals of Energy Systems: *245000*
1 credit/1 semester
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. 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.

Advanced Production Mechanics: *ADV PROD MECH 249600*
1 credit/1 semester
This is a core course for the Oil and Gas Extraction and Distribution concentration that builds a knowledge base and technical skills in the more advanced mechanical aspects of the industry. Topics include: Pneumatics, Hydraulics, Metering devices and provers, Pumps, Gas

compressors, Bearings and seals, Valves, Threaded pipe fabrication, Materials handling, Basic Rigging, Oxy-Fuel cutting, Motorized, and Forklifts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members in the appropriate CTSO All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

Chemical Process Control: *244900* **Grade 12**
1 credit/1 semester
The Chemical Process Control course is an introductory course designed for students to gain basic understanding of the science, equipment, processes and safety encountered in a chemical plant. The performance skill sets are written so students will conduct some basic hands-on experiments with chemical processes and manipulate various pieces of equipment such as valves and pumps to gain an understanding of parts, functions and role of each.

Architecture & Construction

AR 1820 Carpentry
Required Courses
1842 Carpentry I
1843 Carpentry II
1844 Carpentry III
1845 Carpentry IV
Electives
1828 Building Construction Applications
1769 Residential Wiring
1829 Masonry & Plumbing
0520 Work Base Integration & Transition

Carpentry I: *CARPENTRY I 184200*
1 credit/1 semester
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. 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.

Carpentry II: *CARPENTRY II 184300*

1 credit/1 semester
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. 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.

Carpentry III: *CARPENTRY III 184400*
1 credit/1 semester
Carpentry III will continue to build student skill sets in areas of Commercial Drawings; Roofing Applications; Thermal and Moisture Protection; and Exterior Finishing. 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 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.

Carpentry IV: *CARPENTRY IV 184500*
1 credit/1 semester
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. 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.

Building Construction Applications: *BLPRT RDG CNSTR 182800*
1 credit/1 semester
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 foundation and fr aming procedures and foundation and framing applications. Emphasis will be placed on c areer 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, and teachers shoul d provide each student with real world learning opportunities and instruction related to c onstruction applications.

Residential Wiring: *ELEC-RESID WIRE 176900*
1 credit/1 semester
This course introduces the student to the knowledge base and technical skills for Residential Wiring. Areas of study include wiring data, service entrance equipment, luminary and receptacle outlets, protective devices, appliance and special circuits and low-voltage systems. 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.

Masonry and Plumbing: *BLDCNS-MASONRY 182900*
1 credit/1 semester
This course introduces the student to the knowledge base and technical skills for concepts in the Building Construction Concentration. Areas of study include estimation, masonry materials, rough in plumbing systems and installation of finish plumbing. 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, and teachers should provide each student with real world learning opportunities and instruction related to masonry and plumbing.

Work Base Integration & Transition: *WKBD INTE/TRAN 0520CA*
1 credit/1 semester
This course gives students the opportunity to integrate theory and practice by interacting with industry professionals. Students will study various requirements for employability including ethics, communication, teamwork and professionalism. Students will participate in hands-on, digital or work-based experiences related to industry settings in order to practice skill sets and to transition from student to employee. A supervised project will be developed in one or more of the following categories: Entrepreneurship (ownership or operation of a business); Placement (employment or internship); Research and Experimentation (planning and/or conducting a scientific experiment); Exploration (exploration of related careers through activities such as shadowing employees in various work settings, conducting on-line research, attending professional development activities, etc.). Students will develop materials to supplement their Simulated Workplace portfolios.

AR 1720 Drafting
Required
1729 Fundamentals of Drafting
1727 Drafting Techniques
1725 Mechanical Drafting
1721 Architectural Drafting

Fundamentals of Drafting: *CMPDRFT-FUND 172900*
1 credit/1 semester
This course introduces the student to the knowledge base and technical skills for all courses in the Drafting concentration. Areas of study include tools and equipment, measurement, basic

drafting techniques, freehand technical sketching, orthographic projection, dimensioning, basic computer skills, and drawing techniques. 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.

Drafting Techniques: *CMPDRFT-TCHQ 172700*
1 credit/1 semester
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. 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

Mechanical Drafting: *CMPDRFT-MECH 172500*
1 credit/1 semester
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. 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.

Architectural Drafting: *CMPDRFT-ARCH 172100*
1 credit/1 semester
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. 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.

Architectural Drafting: *CMPDRFT-ARCH 172100*
1 credit/1 semester
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. 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.

Computer Aided Drafting: *CMPDRFT ADV 172800*
1 credit/1 semester
This course introduces the student to the knowledge base and technical skills for advance d computer aided drafting. Areas of study include paper space/model space, layout, and add-on software. Students will demonstrate knowledge and technical expertise in the use of CAD software. Emphasis will be placed on personal and professional ethics, and students will explore a variety of career opportunities. Students will utilize problem-solving techniques and participate in laboratory activities to develop an understanding of course concepts and teachers should provide each student with real world learning opportunities and instruction related to drafting, design, and engineering occupations. Safety instruction is integrated into all activities.

Mechanical Drafting: *CMPDRFT-MECH 172500*
1 credit/1 semester
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. 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.

Piping System Drafting: *CMPDRFT PIPE 172200*
1 credit/1 semester
This course introduces the student to the knowledge base and technical skills for piping drafting. Areas of study include piping, joints and fittings, valves, and schematics and layouts. Emphasis will be placed on personal and professional ethics, and students will explore a variety of career opportunities. Students will utilize problem-

solving techniques and participate in laboratory activities to develop an understanding of course concepts, and teachers should provide each student with real world learning opportunities and instruction related to drafting, design, and related engineering occupations. Safety instruction is integrated into all activities.

Manufacturing

MA 1980 Welding Technology

Required

1862 Welding I
1863 Welding II
1864 Welding III
1865 Welding IV

Electives

1989 Gas Tungsten Arc Welding
1983 Blueprint Reading Metallurgy
1987 Gas Metal Arc Welding
1982 Ornamental Metalwork *(Can be used as a Fine Arts credit.)*

Welding I: *WELDING I 186200*

1 credit/1 semester

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. 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.

Welding II: *WELDING II 186300*

1 credit/1 semester

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. 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.

Welding III: *WELDING III 186400*

1 credit/1 semester
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. 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.

Welding IV: *WELDING IV 186500*
1 credit/1 semester
Welding IV will continue to build student skill sets in areas of GTAW-Equipment and Filler Metals; and GTAW-Plate. 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.

Gas Tungsten Arc Welding: *WELD-GAS TNG 198900*
1 credit/1 semester
The Skill Sets in this course are representative of the basic knowledge included in a Career and Technical Welding concentration. 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

Blueprint Reading and Metallurgy: *WELD-BLPRT RD 198300*
1 credit/1 semester
The Skill Sets in this course are representative of the basic knowledge included in a Career and Technical Education Welding concentration. 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 concentration.

Gas Metal Arc Welding: *WELD-ARC 198700*
1 credit/1 semester
The Skill Sets in this course are representative of the basic knowledge included in a Career and Technical Welding concentration. 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.

Ornamental Metalwork: *WELD-ARNMENT 198200*
1 credit/1 semester
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.

MA 1630 Robotics
Required
1866 REC 1
1867 REC 2
1868 REC 3
1869 REC 4

Robotics Rec 1: *ROBOTICS REC 1 186600*
1 credit/1 semester
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. 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.

Robotics Rec 2: *ROBOTICS REC 2 186700*
1 credit/1 semester
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. 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 a student organization, SkillsUSA West Virginia. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

Robotics Rec 3: *ROBOTICS REC 3 186800*
1 credit/1 semester
In REC 3, students continue with deeper engineering topics, building more advanced robots. 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 a student organization, SkillsUSA West Virginia. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

Robotics Rec 4: *ROBOTICS REC 4 186900*
1 credit/1 semester
In REC 4, students are engaged in a Capstone project: Bucket Battle. 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 a student organization, SkillsUSA West Virginia. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

INFORMATION TECHNOLOGY

IT 1680 Computer System Repair Technology
1705 Fundamentals of Computer Systems
1664 A+ Essentials
1665 A+ Practical Application
1694 Networking Essentials

1695 Server Essentials
1696 Security +
1697 Wireless Network Essentials
0520 Work Base Integration & Transition

Fundamentals of computer systems: *COM SYS FUND 170500*
1 credit/1 semester
This course introduces the student to the knowledge and technical skills for all courses in the Computer Systems Repair Technology pathway. Areas of study include computer hardware, data representation, operating system, utility, productivity software, communications and networks and the Internet. 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, SkillsUSA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

Comptia A+ 220-801: *COMPTIA A+ 801 166400*
1 credit/1 semester
This courses introduces the knowledge required to understand the fundamentals of computer technology, networking and security, and students will acquire the skills needed to identify hardware, peripheral, networking and security components. Content Skill Sets are based on testing objectives for the CompTIA A+220801 certification. 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. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

Comptia A+ 220-802: *COMPTIA A+ 802 166500*
1 credit/1 semester
This course introduces the competencies for an entry-level IT professional who has hands-on experience in the lab or the field. Successful candidates will have the skills required to install, configure, upgrade and maintain PC workstations, the Windows OS and SOHO networks. The successful candidate will utilize troubleshooting techniques and tools to effectively and efficiently resolve PC, OS and network connectivity issues and implement security practices. Job titles in some organizations which are descriptive of the role of this individual may be: Enterprise technician, IT administrator, field service technician, PC or Support technician, etc. Content Skill Sets are based on testing objectives for the CompTIA A+ 220-802 certification. 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. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

Networking+: *NETWORKING+ 169400*
1 credit/1 semester
This course introduces the student to the knowledge base and technical skills related to networking. Areas of study include media and topologies, protocols and standards, network implementation and network support. Content Skill Sets are based on testing objectives for the CompTIA Network+ certification. 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, SkillsUSA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

Server+: *SERVER+ 169500*
1 credit/1 semester
This course introduces the student to the knowledge base and technical skills related to working with network servers. Areas of study include server hardware, server installation, server configuration, server upgrade, proactive maintenance, security and environmental issues, troubleshooting, and disaster recovery. Emphasis will be placed on personal and professional ethics and students will explore a variety of career opportunities. This course is recommended as an **Elective** in the Computer Systems Repair Technology concentration. Content Skill Sets are based on testing objectives for the Server+ Students will utilize problem-solving techniques and participate in laboratory activities to develop an understanding of course concepts, and teachers should provide each student with real world learning opportunities and instruction related to occupations in computer repair and networking. Students are encouraged to become active members of the student organization, SkillsUSA. Safety instruction is integrated into all activities.

Security+: *NETSEC+ 169600*

1 credit/1 semester
This course introduces the students to the knowledge base and technical skills related to working with network security. Areas of study include Network Security, Compliance and Operational Security, Threats and Vulnerabilities, Application, Data and Host Security, Access Control and Identity Management and Cryptography. Courses are aligned with CompTia standards. Emphasis will be placed on personal and professional ethics and students will explore a variety of career opportunities. This course is recommended as an **Elective** in the Computer Systems Repair Technology concentration. Students will utilize problem-solving techniques and participate in laboratory activities to develop an understanding of course concepts, and teachers should provide each student with real world learning opportunities and instruction related to occupations in computer repair and networking. Students are encouraged to become active members of the student organization, SkillsUSA. Safety instruction is integrated into all activities.

Wireless Networking Essentials: *NET-TECHWNE 169700*
1 credit/1 semester
This course introduces the student to the knowledge base and technical skills to install, maintain, repair and troubleshoot the hardware and software functionality of RFID products. Areas of study include interrogation zone basics, testing and troubleshooting, standards and regulations, tag knowledge, design selection, installation, site analysis, RF physics and RFID peripherals. Emphasis will be placed on personal and professional ethics, and students will explore a variety of career opportunities. This course is recommended as an **Elective** in the Computer Systems Repair Technology concentration. Students will utilize problem-solving techniques and participate in laboratory activities to develop an understanding of course concepts, and teachers should provide each student with real world learning opportunities and instruction related to occupations in networking. Students are encouraged to become active members of the student organization, SkillsUSA. Safety instruction is integrated into all activities.

Work-based Integration and Transition: *WKBD INTE/TRAN 0520CS*
1 credit/1 semester
This course gives students the opportunity to integrate theory and practice by interacting with industry professionals. Students will study various requirements for employability including ethics, communication, teamwork and professionalism. Students will participate in hands-on, digital or work-based experiences related to industry settings in order to practice skill sets and to transition from student to employee. A supervised project will be developed in one or more of the following categories: Entrepreneurship (ownership or operation of a business); Placement (employment or internship); Research and Experimentation (planning and/or conducting a scientific experiment); Exploration (exploration of related careers through activities such as shadowing employees in various work settings, conducting on-line research, attending professional development activities, etc.). Students will develop materials to supplement their Simulated Workplace portfolios.

IT 1450 Information Management
1455 Webpage Publishing

1431 Digital Imaging Multimedia I *(Can be used as a Fine Arts credit.)*
1432 Digital Imaging Multimedia II
1411 Business Computer Applications I

LAW AND PUBLIC SAFETY

LA1020 Law & Public Safety

Required
1225 Fundamentals of Public Safety Leadership
1226 Ethical Issues in Public Safety Leadership
1039 Practical Applications of Public Safety Leadership
Electives
1035 Law Enforcement
1034 Corrections

Fundamentals of Public Safety Leadership: *FD PUB SFTY LDSP 122500*

1 credit/1 semester
This course is designed to present foundational principles of Public Safety Leadership including: how public safety leaders protect a democratic society; public policy issues such as crime and justice; history, organization and functions of components of public safety including the
criminal justice system; and the issues and challenges relating to the admi nistration of justice in a culturally diverse society. Students 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 the student organization SkillsUSA. Teachers should provide each student with real world learning opportunities and instruction. All West Virginia teachers are 7 responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

Ethical Issues in Public Safety Leadership: *ETHL ISS PUB SFTY 122600*

1 credit/1 semester
This course is designed to examine the philosophical issues and applications of the objectives
and processes of Public Safety Leadership including; Constitutional limitations; accountability;
civil liability; criminal investigation; criminal procedure; and forensics. By exa mining societal and psychological stressors that contribute to behavior, students will examine a variety of 10 serious offenses and apply concepts of

profiling, behavioral analysis and threat assessment within an ethical paradigm. Students will analyze and critique the system of dealing with convicted persons and the long term implications of corrections policy. The principles and procedures used in criminal investigation will be introduced. Procedures for implementing criminal law such as the Incorporation Doctrine, search and seizure, warrant requirements, arrest, the right to counsel, interrogation, identification procedures, entrapment, cruel and unusual punishment, etc. will be discussed. Students 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 the student organization SkillsUSA. Teachers should 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.

Practical Applications of Public Safety Leadership: *PR APP PUB SFTY 103900*
1 credit/1 semester
This course is designed to give students the opportunity to connect theory and practice by interacting with Public Safety professionals. Students will study various requirements for employability in the Public Safety field including ethics, teamwork, and professionalism. Students may participate in activities associated with Public Safety agencies (such as county and local law enforcement, county judicial offices, correctional facilities, training academies, social services, etc.) for hands-on or work-based experiences. Preparation includes construction of a
portfolio that can be utilized in obtaining employment upon completion of the student's program. Students 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 the student organization SkillsUSA. Teachers should 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.

Seminar Law Enforcement: *SEM LAW ENFORC 103500*
1 credit/1 semester
This course is designed to provide students with fundamental principles of the law enforcement field such as the history of policing in the US, the

characteristics of law enforcement agencies
and types of police activities including criminal investigation. Current issue s and trends in law enforcement will be investigated. Aspects of criminal investigation such as evidence collection, fingerprinting, latent dusting, interviewing and report writing will be presented. 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. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

Seminar Corrections: *SEM CORRECT 103400*
1 credit/1 semester
This course is designed to provide students with fundamental principles in the corrections field including: the evolution of correctional practices and philosophies including treatment models; correctional law; the relationship of correctional activities to other aspects of the criminal justice system; detention facilities; and probation and parole programs. The differences between levels of security and characteristics of offenders (such as gender and age) and the development of inmate cultures will be examined. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Students are encouraged to 8 become active members of the student organization SkillsUSA. Teachers should 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.

Wetzel County Technical Education Center

WELDING

Welding (MA1980)
Two Year Program
Year I
Semester I
Welding I
Ornamental Metal Work *also counts as an art credit*
Semester II
Welding II
Blueprint Reading and Metallurgy
Year II
Semester1
Welding III
Gas Tungsten Arc Welding
Semester 2
Welding IV
Gas Metal Arc Welding

Required
1862 Welding I
1863 Welding II
1864 Welding III
1865 Welding IV
Electives
1989 Gas Tungsten Arc Welding
1983 Blueprint Reading Metallurgy
1987 Gas Metal Arc Welding
1982 Ornamental Metalwork *(Can be used as a Fine Arts credit.)*

Welding I: *WELDING I 186200*
1 credit/1 semester
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. 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.

Welding II: *WELDING II 186300*
1 credit/1 semester
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. 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.

Welding III: *WELDING III 186400*
1 credit/1 semester
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. 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.

Welding IV: *WELDING IV 186500*
1 credit/1 semester
Welding IV will continue to build student skill sets in areas of GTAW-Equipment and Filler Metals; and GTAW-Plate. 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.

Gas Tungsten Arc Welding: *WELD-GAS TNG 198900*
1 credit/1 semester
The Skill Sets in this course are representative of the basic knowledge included in a Career and Technical Welding concentration. 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

Blueprint Reading and Metallurgy: *WELD-BLPRT RD 198300*
1 credit/1 semester
The Skill Sets in this course are representative of the basic knowledge included in a Career and Technical Education Welding concentration. 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 concentration.

Gas Metal Arc Welding: *WELD-ARC 198700*
1 credit/1 semester
The Skill Sets in this course are representative of the basic knowledge included in a Career and Technical Welding concentration. 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.

Ornamental Metalwork: *WELD-ARNMENT 198200*
1 credit/1 semester
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.

ELECTRICAL

Electrical Technician (AR1760)
Two Year Program
Year I
Semester I
Electrical Trades I
*National Electrical Code

Semester II
Electrical Trades II
*Residential Wiring
Year 2
Semester I
Electrical Trades III
*Industrial and Commercial Wiring
Semester II
Electrical Trades IV
*Integrated Electrical Lab
*courses are subject to change
Required
1756 Electrical Trades I
1757 Electrical Trades II
1758 Electrical Trades III
1759 Electrical Trades IV
Electives
1765 Industrial and Commercial Wiring
1766 Integrated Electrical Lab
1767 National Electrical Code
1769 Residential Wiring

Electrical Trades I: *ELEC-TECH I 175600*
1 credit/ 1 semester
This course introduces the student to the knowledge base and technical skills of the
Electrical Trades industry. Electrical Trades I begin with the NCCER Cor e curriculum which is a prerequisite to all Level I completions. The stude nts will complete modules in Basic Safety; Introduction to Construction Math; Introduction to
Hand Tools; Introduction to Power Tools; Introduction to Construction Dra wings; Basic Rigging; Basic Communication Skills; Basic Employability Skills ; and Introduction to Materials Handling. Students will then begin developi ng skill sets related to the fundamentals of Electricity such as Orientation to the Electrical Trade; and Electrical Safety. Students utilize problem-solving techniques and participate in hands-
on activities to develop an understanding of course concepts. Teachers sh ould 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 integr ates learning skills, technology tools, and skill sets.

National Electrical Code: *ELEC-NTL CODE 176700*
1 credit/ 1 semester
This course introduces the student to the knowledge base and technical skills for the NEC. Areas of study include demonstrating skills in the use of the NEC, applying calculations to assure
NEC standards are met. Emphasis will be placed on career exploration, jo b seeking skills and personal and professional ethics. Safety instruction is integrated into all activities. Students will 19 utilize problem-
solving techniques and participate in laboratory activities to develop an un derstanding of course concepts.

Electrical Trades II: *ELEC-TECH II 175700*
1 credit/ 1 semester
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 Fi ttings; Conductors and Cables; Basic Electrical Construction Drawings; Residential Electrical Services; and Electrical Test
Equipment. Students utilize problem
solving techniques and participate in hands-
on activities to develop an understanding of course concepts. Teachers sh ould 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.

Residential Wiring: *ELEC-RESID WIRE 176900*
1 credit/ 1 semester
This course introduces the student to the knowledge base
and technical skills for Residential Wiring. Areas of study include wiring d ata, service entrance equipment, luminary and receptacle outlets, protective devices, appliance and special circuits and low-voltage systems. Emphasis will be placed on career exploration, job seeking skills and personal and
professional ethics. Safety instruction is integrated into all activities. Stude

nts will utilize problem-
solving techniques and participate in laboratory activities to develop an understanding of course concepts.

Electrical Trades III: *ELEC-TECH III 175800*
1 credit/ 1 semester
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.

Industrial and Commercial Wiring: *ELEC-I&C WIRE 176500*
1 credit/ 1 semester
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. 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 and teachers should provide each student with real world learning opportunities and instruction related to course concepts.

Electrical Trades IV: *ELEC-TECH IV 175900*
1 credit/ 1 semester
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. Students utilize problem-
solving techniques and participate in hands-
on activities to develop an understanding of course concepts. Teachers sh

ould 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.

Integrated Electrical Lab: *ELEC-INTRG LAB 176600*
1 credit/ 1 semester
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. 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, and teachers should provide each student with real world learning opportunities and instruction related to course concepts.

HEALTH OCCUPATIONS