

# HUNDRED HIGH SCHOOL CURRICULUM HANDBOOK AND PROGRAMS OF STUDY

2019 - 2020

## **AGRICULTURAL, FOOD AND NATURAL RESOURCES CLUSTER (AG)**

### **AG0120 AGRIBUSINESS SYSTEMS**

Pathway Description: The Agribusiness Systems pathway focuses on entrepreneurial and technical skills and careers in the broad spectrum of Agriculture, Food, and Natural Resources. Students who wish to complete this pathway must successfully complete the following classes: 0101 INTR AG FD & NAT, 0102 SCI AG, 0134 AG EXPER PRG AND ONE OF THE FOLLOWING SPECIALIZATIONS: 0212 HORTICULTURE OR 0136 ADV PRIN AG OR 0140 ANIMAL PROCESSING.

#### **INTRO TO AGRICULTURE, FOOD & NATURAL RESOURCES 0101**

This is a core course for the Agriculture, Food and Natural Resources Career Cluster that builds a knowledge base and technical skills in all aspects of the industry. Learners will be exposed to a broad range of agriculture, food and natural resources careers. 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, FFA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

#### **SCIENCE OF AGRICULTURE 0102**

This course focuses on the basic scientific principles and processes related to the production of plants and animals for the food and fiber systems. Topics of instruction include basic understanding of the livestock/poultry industry and its various components, career opportunities, soil science, crop science/agronomy, weed science, basic agricultural mechanics and related industry careers, environmental stewardship, entrepreneurship, and leadership/personal development. 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, FFA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

## **HORTICULTURE**

**0212**

This course provides instruction on the broad field of horticulture with emphasis on the scientific and technical knowledge for a career in horticulture. Topics in this course include plant growth and development, plant nutrition, media selection, basic plant identification, pest management, chemical disposal, customer relations, career opportunities, leadership development and entrepreneurial skills. 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, FFA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

## **ADVANCED PRINCIPLES OF AGRICULTURE**

**0136**

This course provides instruction that expands the scientific knowledge and technical skills gained in The Science of Agriculture. Topics of instruction include livestock/poultry industry and its various components, career opportunities, soil science, crop science/agronomy, weed science, agricultural machinery and related industry careers, environmental stewardship, entrepreneurship, and leadership/personal development. 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, FFA. West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

## **FUNDAMENTALS OF ANIMAL PROCESSING**

**0139**

This course introduces students to the principles and applications of animal processing. Students will learn carcass grading, primal and retail cuts, workplace safety, how to process primal and retail cuts, and entrepreneurship. 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, FFA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

## **AGRICULTURAL EXPERIENCE PROGRAM**

**0134**

The Supervised Agricultural Experience program is a hands-on, student planned way for them to apply skills learned in the classroom to real world agricultural experiences. With help from their agricultural teachers, students develop an SAE project based on one or more SAE categories: Entrepreneurship, Placement, Research and Experimentation and Exploratory.

## **AG0210 PLANT SYSTEMS**

Pathway Description: The Plant Systems pathway focuses on entrepreneurial and technical skills and careers in the areas of plant science, greenhouse management and production, fruit and vegetable production, floriculture and turf and landscape systems. Students who wish to complete this pathway must successfully complete the following classes: 0101 INTR AG FD & NAT, 0212 HORTICULTURE, 0134 AG EXPER PRG AND 0214 GRNHSE PROD.

## **GREENHOUSE PRODUCTION**

**0214**

This specialization course covers instruction that expands the scientific knowledge and skills to include more advanced scientific computations and communication skills needed in the horticulture industry. Topics include greenhouse plant production and management, bedding plant production, watering systems light effects, career planning, leadership development and entrepreneurial skills. 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, FFA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

# **ADVANCED PLACEMENT COURSES**

In addition to AP Calculus, AP Language, AP Literature. Hundred 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 Courses taught at HHS are described in the appropriate subject area.

## **ARTS, A/V TECHNOLOGY AND COMMUNICATIONS CLUSTER (AV)**

The Arts, A/V Technology and Communications Cluster introduce students to the knowledge base and technical skills for careers in broadcasting, graphic communications and designs. Taught by industry credentialed teachers, courses offer real world project based learning activities to develop an understanding of course concepts. Emphasis is placed on career exploration, job seeking skills, and personal and professional ethics. Safety instruction is integrated into all activities. Students are encouraged to become active members of Skills USA for additional co-curricular opportunities that enhance student achievement, develop student leadership, and support experiential learning.

### **AV 1680 BROADCASTING TECHNOLOGY**

The Broadcasting Technology Program of Study focuses on careers related to the broadcasting industries of both television and radio. Students obtain skills to work in program production, news-related, technical, sales, and management occupations in broadcasting.

#### **FUNDAMENTALS OF BROADCASTING**

**1681**

This course introduces the student to the knowledge base and technical skills for all courses in the Broadcasting Technology Program of Study. Areas of study include fundamentals of broadcasting, broadcasting equipment, on-air presentation skills, and student organizations. 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 broadcasting occupations. Students are encouraged to become active members of Skills USA for additional co-curricular opportunities that enhance student achievement, develop student leadership, and support experiential learning. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

## **RADIO BROADCASTING PRESENTATIONS**

**1683**

This course will provide students with the knowledge to perform, either in a live or mock setting, a radio broadcast. Areas of study include on-air news presentations, deejay presentations, radio production and management, and student organizations. Students will demonstrate knowledge and technical expertise in the preproduction and performance of a live 30-minute show. 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 broadcasting occupations. Safety instruction is integrated into all activities. Students are encouraged to become active members of Skills USA for additional co-curricular opportunities that enhance student achievement, develop student leadership, and support experiential learning. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

## **TELEVISION PRODUCTION APPLICATIONS**

**1685**

This course will provide students with the knowledge to perform, either in a live or mock setting, or a television broadcast. Areas of study include writing television news, conducting interviews, preproduction, production, and student organizations. Students will demonstrate knowledge and technical expertise in the use of television production equipment and applications. 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 broadcasting occupations. Safety instruction is integrated into all activities. Students are encouraged to become active members of Skills USA for additional co-curricular opportunities that. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

## **VIDEO EDITING**

**1684**

This course is an introduction to the techniques, equipment, and applications used in Video Editing. Areas of study include the production process, ingestion, non-linear editing, final package distribution, and student organizations. Students will demonstrate technical expertise in non-linear video editing 7 techniques. 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 broadcasting occupations. Safety instruction is integrated into all activities. Students are encouraged to become active members of Skills USA for additional co-curricular opportunities that enhance student achievement, develop student leadership, and support experiential learning. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

## **AV2010 PERFORMING ARTS**

The Performing Pathway focuses on preparing students with the skills necessary to succeed in a performing arts field of work.

### **MANAGEMENT AND ENTREPRENEURSHIP**

**1445**

This area of study provides a background for the development and operation of a business starting with the role of the entrepreneur and leading to the development of a business plan. This course also explores the planning, organizing, controlling, and operation of a business. 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 opportunities and instruction related to selection, development, and maintenance of individual marketing and business education programs. Students are encouraged to become active members of the student organizations, DECA or FBLA, national student organizations for those enrolled in marketing and business education. DECA and FBLA are integral components of the programs and provide curricular opportunities that enhance student achievement. Teachers should use relevant DECA or FBLA activities to support experiential learning. 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 skill sets.

### **WEB PAGE PUBLISHING**

**1455**

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

## **SPECIALIZATION TO COMPLETE**

### **INSTRUMENTAL A1**

BAND III	3613	BAND IV	3614
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### **INSTRUMENTAL A3**

PIANO I	3681	PIANO II	3682
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### **INSTRUMENTAL A4**

GUITAR I	3726	GUITAR II	3727
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### **VOCAL B**

CHORUS III	3623	CHORUS IV	3624
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### **THEATRICAL C**

THEATRE III	3803	THEATRE IV	3804
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## **BUSINESS MANAGEMENT AND ADMINISTRATION CLUSTER (BM)**

### **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 21<sup>st</sup> Century Learning include the following components: 21<sup>st</sup> Century Content Standards and 21<sup>st</sup> 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.

## **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.

## **DUEL CREDIT COURSES**

### **TRANSITION ENGLISH LANGUAGE ARTS FOR SENIORS**

**4013**

Reading and English Language Arts twelfth grade students will focus and polish personal skills and goals. Experiences such as a senior project or a sophisticated persuasive research paper will culminate the graduation experience. Evaluation, analysis and appreciation of language and literature in spoken and written form will be the primary focus. Readiness for the work place, by thinking creatively and logically to solve problems and using tools that are essential for workplace productivity, and post secondary education is the final educational reality check during the twelfth grade year. To meet the needs of the 21st century student, instructional delivery should be enhanced through a wide range of media. 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 ARTS**

### **ENGLISH LANGUAGE 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 LANGUAGE 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 LANGUAGE 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.

## **TRANSITION ENGLISH LANGUAGE ARTS FOR SENIORS 4013**

Reading and English Language Arts twelfth grade students will focus and polish personal skills and goals. Experiences such as a senior project or a sophisticated persuasive research paper will culminate the graduation experience. Evaluation, analysis and appreciation of language and literature in spoken and written form will be the primary focus. Readiness for the work place, by thinking creatively and logically to solve problems and using tools that are essential for workplace productivity, and post secondary education is the final educational reality check during the twelfth grade year. To meet the needs of the 21st century student, instructional delivery should be enhanced through a wide range of media. 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.

## **ADVANCED PLACEMENT-LITERATURE 4042**

Learn to analyze and interpret imaginative literature through the careful reading and critical analysis of representative works from various genres and periods.

Explore literary elements such as a work's structure, style and themes, as well as the use of figurative language, imagery, symbolism and tone. Develop your writing skills as you express your ideas and analysis in expository, analytical, and argumentative essays. High rigor is expected at this college level course.

The course is approved by the College Board, and a lengthy, comprehensive exam officiated by the board is expected to be taken as a part of the course.

## **ADVANCED PLACEMENT-LANGUAGE 4041**

AP English Language and Composition is a course in the study of rhetoric taken in high school and often followed by the AP English Literature and Composition course. Students choosing AP English Language and Composition should be interested in studying and writing various kinds of

analytic or persuasive essays on nonliterary topics. This is a college level course, and the rigor will be high for the class. The course is approved by the College Board, and a lengthy, comprehensive exam officiated by the board is expected to be taken as a part of the course.

## **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.

# **HUMAN SERVICES (HU)**

## **FUNDAMENTALS OF HUMAN SERVICES**

**0928**

This course is designed to describe fundamental principles of the helping professions within the Human Services career cluster. Students will synthesize the knowledge, skills, attitudes and practices required for careers addressing the social issues and concerns of individuals, families and communities. Topics include: the roles and functions of Human Service professionals; professional, legal, ethical and safety issues and policies; Human Services interventions such as effective communication skills, problem-solving techniques and wellness initiatives; issues relating to disadvantaging conditions experienced by recipients of Human Services; and diversity. 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 FCCLA or HOSA. 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.

## **HUMAN DEVELOPMENT**

**0904**

This course is designed to focus on principles of human development across the life-span including developmental concepts, theories, principles and issues relating to growth, development and behavior. Emphasis will be placed on normal growth and milestones and

cognitive, social, emotional, cultural and physical influences. The implications of developmental theory on parenting, education, social policy formation and self-understanding will be examined. Students will use reasoning processes, individually and collaboratively, to take responsible action in families, workplaces, and communities. 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 FCCLA. 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 SOCIAL SERVICES**

**1070**

This course is designed to give students the opportunity to connect theory and practice by interacting with Social Services professionals. Students will study various requirements for employability in the Social Services field including ethics, teamwork, and professionalism. Students may participate in activities associated with Social Services agencies in various settings 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 FCCLA or HOSA. 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 IN FAMILY AND COMMUNITY SERVICES**

**1073**

This course is designed to provide students with fundamental principles in the family and community services field including: the collaborative and supportive roles that social services workers have with families and communities; the challenges to health, wellness and safety of individuals and families; the needs and accommodations for people with a variety of challenges; social and cultural contexts of communities; the systems perspective of families; and evidence based practice strategies in a variety of family and community situations. 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 FCCLA or HOSA. 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.

# 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.

## **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.

## **IT1442 CODING, APP AND GAME DESIGN COURSES**

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

## **DIGITAL IMAGING/MULTIMEDIA I**

**1431**

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

## **WEB PAGE PUBLISHING**

**1455**

This course is designed to develop student understanding and skills in such areas as Web page design including using Web page development software, creating page layouts, adding images

and frames, creating elements and components, creating tables, managing files, publishing to the Internet, creating hyperlinks, organizing tasks and using codes (markup languages).

## **CODING, APP AND GAME DESIGN I**

**1456**

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

## **CODING, APP AND GAME DESIGN II**

**1457**

This course is designed to develop student knowledge and skills in developing apps and games using more advanced coding and graphic design including both 2D and 3D elements. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.

## **ENERGY AND POWER (Advanced Career)**

**Program of Study: ST2175 Energy, Power and Engineered Systems (Advanced Careers)**

**Courses:**     **2485 AC Energy, Power, and Engineered Systems I\***  
                  **2486 AC Energy, Power, and Engineered Systems II\***  
                  **2487 AC Energy, Power, and Engineered Systems III\***  
                  **2488 AC Energy, Power, and Engineered Systems IV\***

**Program of Study Description:** The Energy, Power and Engineered Systems Program of Study prepares students for college and career readiness in the technical fields of energy, electronics, and engineering systems. Courses focus on blending STEM and CTE.

### **Course Descriptions:**

#### **2485 AC Energy, Power, and Engineered Systems I**

Energy and Power Foundations is a foundational course on the origins and production of renewable and nonrenewable energy sources with an overview of energy and power career fields and cutting edge job opportunities. This course provides students with opportunities to directly test and evaluate theories and practices of energy systems.

#### **2486 AC Energy, Power, and Engineered Systems II**

Energy Transmission and Distribution is a foundational course that begins after initial energy generation. The course continues from energy transmission to consumer usage and in

cludes the introduction to AC/DC power, transformers, the electrical grid and Smart Grid, and consumer load on the system.

### **2487 AC Energy, Power, and Engineered Systems III**

Electronics and Control Systems is the advanced Energy, Power & Engineered Systems course designed to provide training and skills necessary to understand energy control systems in the fields of transformers, switches (electrical, pneumatic, hydraulic and mechanical), breakers, panel boards, switchboards, and programmable logic controllers in both residential and industrial settings.

### **2488 AC Energy, Power, and Engineered Systems IV**

Advanced Science and Engineered Systems is the advanced course designed for students to become building technicians, design engineers, recreational engineers, electrical technicians, and CEOs, while learning about realworld energy and power issues. Students will need to have a basic understanding of electricity (both a/c and d/c) and higher level mathematics. This course incorporates knowledge of multiple sources of energy, engineered systems, societal impact and “the business of energy.”

\*Students must pass all four courses of the Energy, Power and Engineered Systems Advanced Career Program of Study to fulfill the third science course graduation requirement.

## **MATHEMATICS**

### **MATH I**

**3012**

The Math I course builds on the Next Generation Grade 8 standards and is correspondingly more advanced than our previous Algebra I course. Because many of the topics previously included in the Algebra I course are in the Next Generation Grade 8 standards, the High School Math I course starts with more advanced topics and includes more in depth work with linear functions, exponential functions and relationships, transformations and connecting algebra and geometry through coordinates. It also goes beyond the previous high school standards in statistics.

### **MATH I LAB**

**3013**

Math I Lab is designed to reteach concepts learned in class as well as reinforcing basic math skills.

## MATH II

3014

Students will gain an understanding of geometry, proofs, properties of triangles, similarity through transformations, congruence through transformations, congruence theorems, properties of quadrilaterals, introduction to trigonometry, circles, and arcs and sectors of circles and quadratic expressions. Knowledge gained in Math I will be utilized.

## MATH III

3015, 3016, 3017

Math III course builds on the Math II course and offers a more personalized learning plan aligned to students' career aspirations – Math III LA, Math III STEM, or Math III TR. It is in Math III that students pull together and apply the accumulation of learning that they have from their previous courses, with content grouped into four critical areas, organized into units. They apply methods from probability and statistics to draw inferences and conclusions from data. Students expand their repertoire of functions to include polynomial, rational and radical functions. They expand their study of right triangle trigonometry to include general triangles. Finally, students bring together all of their experience with functions and geometry to create models and solve contextual problems.

## MATH IV

3018

MATH IV students will learn to generalize and abstract learning accumulated through previous courses and to provide the **final springboard to calculus**. Students take an extensive look at the relationships among complex numbers, vectors, and matrices. They build on their understanding of functions, analyze rational functions using an intuitive approach to limits and synthesize functions by considering compositions and inverses. Students expand their work with trigonometric functions and their inverses and complete the study of the conic sections begun in Mathematics III. They enhance their understanding of probability by considering probability distributions. Previous experiences with series are augmented.

\*Math III Technical Readiness & Math IV Technical Readiness are course options (for juniors and seniors) built from the mathematics content of Math III through integration of career clusters. These courses integrate academics with hands-on career content. The collaborative teaching model is recommended based at our CTE centers. The involvement of a highly qualified Mathematics teacher and certified CTE teachers will ensure a rich, authentic and respectful environment for delivery of the academics in “real world” scenarios.

**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.

## **AP CALCULUS**

**3031**

The Advanced Placement Calculus class allows students to earn college credit when they successfully complete the AP examination. Students also earn weighted credit when complete the class with a passing grade.

# **PHYSICAL EDUCATION/HEALTH**

## **PHYSICAL EDUCATION 9**

**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 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.

## **LIFE FITNESS**

**6733**

Life Fitness is designed for students who want to have a physical education experience after they have completed the required classes. It will consist of individual workout programs as well as team sports activities. The emphasis is on the overall fitness of the student and their relationship with peers. This will be assessed on an individual basis. Activities will rotate on a monthly basis and the grades will be derived from participation as well as individual work ethic.

## **WEIGHT TRAINING**

**6765**

Weight training is designed to give students a look into the design and implementation of a weight training program. Students will spend time working on weight training, agility exercises, and various other training principles. The class is designed for an upper level student that has an interest in becoming stronger and is willing to work to obtain it.

# SCIENCE

## PHYSICAL SCIENCE

**6011**

Students will develop a foundational knowledge of biology, chemistry, physics, earth/environmental science and astronomy. Through a spiraling, inquiry based program of study, all students will demonstrate scientific literacy and the use of 21<sup>st</sup> Century Skills across these major fields of science. Subject matter is delivered through a coordinated, integrated approach with an emphasis on the development of the major science themes of systems, changes and models. Students will engage in active inquiries, investigations and hands-on activities for a minimum of 50 % of the instructional time to develop conceptual understanding and research/laboratory skills. Safety instruction is integrated in all activities. Building on the knowledge and skills acquired in Science 8, students will expand and deepen their understanding of major concepts such as energy interactions, genetic probabilities, chemical changes and mineral composition of local rock layers. The WV Standards for 21<sup>st</sup> Century Learning include the following components: 21<sup>st</sup> Century Content Standards and Objectives and 21<sup>st</sup> Century Learning Skills and Technology Tools.

## BIOLOGY

**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.

## BIOLOGY II

**6023**

Biology II is an advanced elective course that is designed for students who have completed Biology and desire an in-depth and rigorous study of the content found in many biological fields of endeavor. Currently, BIO II is being offered as a dual credit course through Marshall University, but it may also be taken for high school credit only. This course is designed to build upon and extend the Biology and Conceptual Biology concepts, skills and knowledge from a science program, using skills for the 21st Century. Students interested in health and scientific related careers will evaluate the required academic preparations while building and expanding their laboratory skills and experiences. Students will engage in active inquiries, investigations and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and research/laboratory skills. 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.

## **EARTH AND SPACE SCIENCE**

**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 problems and design solutions related to the course objectives. There is a focus on several scientific practices which include developing and using models, planning and conducting investigations, analyzing and interpreting data, using mathematical and computational thinking, constructing explanations and designing solutions. Students will engage in active inquiries, investigations, and hands-on activities as they develop and demonstrate conceptual understandings and research and laboratory skills described in the objectives. Safety instruction is integrated in all activities, and students will implement safe procedures and practices when manipulating equipment, materials, organisms, and models.

## **AP BIOLOGY**

**6121**

The Advanced Placement Biology curriculum is equivalent to a college course usually taken by biology majors during their first year of college. Students obtain college credit by successfully completing the AP Biology exam at the end of the course. Weighted high school credit is awarded after successfully completing the course. The course differs significantly from a first year high school Biology course with respect to the kind of textbook used, the range and depth of topics covered, the kind of laboratory work done by students, and the time and effort required by the students. The primary emphasis of the course is on developing an understanding of concepts; a grasp of science as a process rather than as an accumulation of facts; personal experience in scientific inquiry; recognition of unifying themes that integrate the major topics of biology; and the application of biological knowledge and critical thinking to environmental and social concerns.

## **CHEMISTRY**

**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.

## **HUMAN ANATOMY AND PHYSIOLOGY**

**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.

## **PHYSICS**

**6304**

Physics is a lab driven college prep course which studies nature’s universal laws with emphasis on process skills. The course builds on the foundation developed in Physical Science. The course is organized around the content areas of kinematics, dynamics, thermodynamics, light and optics, electricity and magnetism and modern physics. A strong mathematical base is needed. Students will engage in active inquiries, investigations and hands-on activities for a minimum of 50% of the instructional time. Safety instruction is integrated into all activities.

# **SOCIAL STUDIES**

## **WORLD HISTORY**

**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**

**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 20<sup>th</sup> 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**

**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**

**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**

**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.

## **SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS CLUSTER (ST)**

Pathway Description: For a future in the Engineering and Technology pathway, students should study and apply principles from advanced mathematics life sciences physical science, earth and space science, and technology. In addition, future engineers and technologists should learn certain processes in mathematics, science and technology. In Grades 9-12, all future engineers and technologists should study mathematics each year, learning important mathematical concepts and processes defined by the National Council of Teachers of Mathematics in Principles and Standards for School Mathematics. With such knowledge and skills, students will be able to demonstrate the following competencies: 1.) Apply mathematics, science and technology concepts to solve problems quantitatively in engineering projects involving design, development or production in various technologies; and 2.) Recognize the core concepts of technology and their relationships with engineering, science and math, and other subjects. All future engineers and technologists should learn important science concepts and processes with an understanding of physics, chemistry and biology as a minimal set. These concepts and processes are defined by the National Research Council in the National Science Education Standards and by the American Association for the Advancement of Science in Benchmarks for Science Literacy. Additionally, learners should become proficient in the areas of technology defined by the Standards for Technological Literacy.

## **ST1790 SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (STEM)**

### **COMMUNICATION SYSTEMS**

**2421**

This course provides opportunities for students to study and apply technological systems, concepts, and processes in communication technology. Group and individual activities engage students in creating ideas, developing innovations, and implementing design solutions as they relate to communication systems. Students will utilize problem-solving techniques and manipulative skills while completing laboratory activities to develop an understanding of course concepts. Safety instruction is integrated into all activities. Students are encouraged to become active members of the Technology Student Association (TSA), which is an integral component of the program and provides curricular opportunities that enhance student achievement. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

### **CONSTRUCTION SYSTEMS**

**2424**

This course provides opportunities for students to study and apply technological systems, concepts, and processes as they relate to construction technology. Group and individual activities engage students in creating ideas, developing innovations, and implementing design solutions as they relate to construction systems. Students will utilize problem-solving techniques and manipulative skills while completing laboratory activities to develop an understanding of course concepts. Topics range from how construction meets the needs of society to basic construction techniques. Safety instruction is integrated into all activities. Students are encouraged to become active members of the Technology Student Association (TSA), which is an integral component of the program and provides curricular opportunities that enhance student achievement. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

### **MANUFACTURING SYSTEMS**

**2442**

This course will introduce students to the basic elements of the manufacturing industry. This course provides opportunities for students to study and apply technological systems, concepts, and processes in the development and operation of a student manufacturing enterprise. Group and individual activities engage students in creating ideas, developing innovations, and implementing design solutions as they relate to manufacturing systems. Students will utilize problem-solving techniques and manipulative skills while completing laboratory activities to develop an understanding of course concepts. Safety instruction is integrated into all activities. Students are encouraged to become active members of the Technology Student Association (TSA), which is an integral component of the program and provides curricular opportunities that

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

## **TRANSPORTATION SYSTEMS**

**2448**

This course provides opportunities for students to study and apply technological systems, concepts, and processes as they relate to relocating people and goods. Group and individual activities engage students in creating ideas, developing innovations, and implementing design solutions as they relate to transportation systems. Students will utilize problem-solving techniques and manipulative skills while completing laboratory activities to develop an understanding of course concepts. Topics range from the transportation subsystems to the sources of energy used in the industry. Safety instruction is integrated into all activities. Students are encouraged to become active members of the Technology Student Association (TSA), which is an integral component of the program and provides curricular opportunities that enhance student achievement. 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.

## **~MARION COUNTY TECHNICAL CENTER~ PROGRAMS OF STUDY**

### **ANIMAL SCIENCE**

Animal & Vet Science Practices	0154
Applied Animal Anatomy & Physiology	0155
Small Animal & Vet Science	0138
Large Animal & Vet Science	0137

Leadership Development

0146

## **HEALTH SCIENCE EDUCATION**

Foundations of Health Science	0711
Medical Terminology	0721
Clinical Specialties I	0789
Clinical Specialties II	0790
Health Science Clinical Experience	0730

## **COLLISION REPAIR**

Fundamentals of Collision Repair	1671
Non-Structural Analysis & Damage Repair	1675
Surface Preparation & Refinishing	1679

## **METALS TECHNOLOGY**

Fundamentals of Machine Tool Technology	1903
Machine Tool Operations	1907
Blueprint Reading & Metallurgy	2114
Fundamentals of Welding Technology	1985
Shielded Metal Arc Welding	1993
Thermal Cutting & Welding	1995

## **Wetzel County Technical Education Center**

## **WELDING**

