

Shenandoah
High School
Course
Handbook

2017-18

COURSE DESCRIPTION INDEX

Advanced Placement.....	2
Agricultural Science.....	3
Business	6
Family & Consumer Science	7
Fine Arts.....	9
Foreign Language	11
Graduation Requirements	2
Health Science.....	11
Industrial Technology	12
Language Arts.....	14
Mathematics.....	15
Mentoring	18
Multi-Occupational Careers	19
Physical Education / Health.....	19
Science	20
Senior Requirement.....	22
Social Sciences.....	22
Special Education.....	23
Work Opportunities.....	24

SHENANDOAH HIGH SCHOOL GRADUATION REQUIREMENTS

Language Arts - 8 credits

Math - 6 credits (must be taken every year)

Science - 6 credits

Physical Education must be taken every year; waivers are available

Social Studies - 6 credits

(including: 2 U.S. History, 2 American Government, 2 Social Science)

Senior Portfolio - 1 credit

A total of 50 credits are required to graduate from Shenandoah HS. Remainder to be completed with electives.

ADVANCED PLACEMENT (AP) COURSES

3132 AP CALCULUS AB

(1 year = 2 credits)

GRADE 12 ELECTIVE

PREREQUISITE: Teacher approval & students should complete four years of secondary mathematics designed for college-bound students: courses in which they study algebra, geometry, trigonometry, analytic geometry, and elementary functions. These functions include linear, polynomial, rational, exponential, logarithmic, trigonometric, inverse trigonometric, and piecewise-defined functions. In particular, before studying calculus, students must be familiar with the properties of functions, the algebra of functions, and the graphs of functions. Students must also understand the language of functions (domain and range, odd and even, periodic, symmetry, zeros, intercepts, and so on) and know the values of the trigonometric functions at the numbers 0, $\pi/6$, $\pi/4$, $\pi/3$, $\pi/2$, and their multiples.

MAXIMUM ENROLLMENT: 10 per section

This is an online course offered through Iowa Online Advanced Placement Academy (IOAPA). AP Calculus AB is roughly equivalent to a first semester college calculus course devoted to topics in differential and integral calculus. The AP course covers topics in these areas, including concepts and skills of limits, derivatives, definite integrals, and the Fundamental Theorem of Calculus. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these representations.

Students learn how to use technology to help solve problems, experiment, interpret results, and support conclusions.

Students are required to take the AP Calculus AB Exam in May.

3211 AP CHEMISTRY

(1 year = 2 credits)

GRADES 11-12 ELECTIVE

PREREQUISITE: Chemistry

MAXIMUM ENROLLMENT: 24 per section

Chemistry is the study of the properties and structure of matter. The AP Chemistry course covers the same content covered in two semesters of general chemistry at a college level. Successful completion of high school chemistry is a prerequisite for AP Chemistry. In AP Chemistry, students will expand their knowledge on, among other topics, the structure of atoms, chemical bonding, chemical reactions, stoichiometry, gas laws, solution chemistry, thermochemistry, nuclear chemistry, reaction kinetics, electrochemistry, equilibrium, acids and bases, and more. The course is also designed to replicate the same experience as that of college chemistry laboratory course. Students will spend time doing in-depth experiments and write college level quality lab reports. Using the history of scientific theory, science textbooks, lab investigations, and research, students will become even more scientifically literate in chemistry. Not only will students listen to lectures, but they will participate in brainstorming, cooperative learning, guided practice, inquiry, and note-taking. Students will also use some memorization, graphic organizers, research, and technology to aid their learning. The course is designed to improve the study skills that are necessary to be successful in rigorous college level courses. Students are required to take the AP Chemistry Exam in May.

3867 **AP COMPUTER SCIENCE A** (1 year = 2 credits) GRADES 11-12 ELECTIVE

PREREQUISITE: Teacher approval & Algebra 1, Algebra 2 is recommended

MAXIMUM ENROLLMENT: 10 per section

Students will learn to design and implement computer programs that solve problems relevant to today's society, including art, media, and engineering. AP Computer Science A teaches object-oriented programming using the Java language and is meant to be the equivalent of a first semester, college-level course in computer science. It will emphasize problem solving and algorithm development, and use hands-on experiences and examples so that students can apply programming tools and solve complex problems. Students are required to take the AP Computer Science Exam in May.

3212 **AP PHYSICS** (1 year = 2 credits) GRADES 11-12 ELECTIVE

PREREQUISITE: Teacher approval & HS Physics

MAXIMUM ENROLLMENT: 10 per section

Students should have completed geometry and be concurrently taking Algebra II or an equivalent course. Although the Physics 1 course includes basic use of trigonometric functions, this understanding can be gained either in the concurrent math course or in the AP Physics 1 course itself.

This is an online course offered through Iowa Online Advanced Placement Academy (IOAPA). AP Physics 1 is an algebra-based, introductory college-level physics course that explores topics such as Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound; and introductory, simple circuits. Through inquiry-based learning, students will develop scientific critical thinking and reasoning skills. Students are required to take the AP Physics Exam in May.

Laboratory Requirement: This course requires that 25 percent of the instructional time will be spent in hands-on laboratory work, with an emphasis on inquiry-based investigations that provide students with opportunities to apply the science practices.

3230 **AP BIOLOGY** (1 year = 2 credits) GRADES 11-12 ELECTIVE

PREREQUISITE: Teacher approval & successful completion of HS Biology & HS Chemistry

MAXIMUM ENROLLMENT: 10 per section

This is an online course offered through Iowa Online Advanced Placement Academy (IOAPA). AP Biology is an introductory college-level biology course. Students cultivate their understanding of biology through inquiry-based investigations as they explore the following topics: evolution, cellular processes — energy and communication, genetics, information transfer, ecology, and interactions. Students are required to take the AP Biology Exam in May.

Laboratory requirement: This course requires that 25 percent of the instructional time will be spent in hands-on laboratory work, with an emphasis on inquiry-based investigations that provide students with opportunities to apply the science practices.

3307 **AP ENGLISH LANGUAGE & COMPOSITION** (1 year = 2 credits) GRADES 11-12 ELECTIVE

PREREQUISITE: Teacher approval & ability to read and comprehend college-level texts and apply the conventions of Standard Written English in their writing

MAXIMUM ENROLLMENT: 10 per section

This is an online course offered through Iowa Online Advanced Placement Academy (IOAPA). The AP English Language and Composition course aligns to an introductory college-level rhetoric and writing curriculum, which requires students to develop evidence-based analytic and argumentative essays that proceed through several stages or drafts. Students evaluate, synthesize, and cite research to support their arguments. Throughout the course, students develop a personal style by making appropriate grammatical choices. Additionally, students read and analyze the rhetorical elements and their effects in non-fiction texts, including graphic images as forms of text, from many disciplines and historical periods. Students are required to take the AP English Language and Composition Exam in May.

3308 AP ENGLISH LITERATURE & COMPOSITION (1 Year = 2 credits) GRADES 11-12 ELECTIVE
PREREQUISITE: Teacher approval & ability to read and comprehend college-level texts and apply the conventions of Standard Written English in their writing
MAXIMUM ENROLLMENT: 10 per section

This is an online course offered through Iowa Online Advanced Placement Academy (IOAPA). The AP English Literature and Composition course aligns to an introductory college-level literary analysis course. The course engages students in the close reading and critical analysis of imaginative literature to deepen their understanding of the ways writers use language to provide both meaning and pleasure. As they read, students consider a work's structure, style, and themes, as well as its use of figurative language, imagery, symbolism, and tone. Writing assignments include expository, analytical, and argumentative essays that require students to analyze and interpret literary works. Students are required to take the AP English Literature and Composition Exam in May.

3404 AP AMERICAN GOVERNMENT (1 year = 2 credits) GRADE 12 ELECTIVE
PREREQUISITE: Social Science
MAXIMUM ENROLLMENT: 25 per section

This course is offered at Shenandoah High School and is modeled after the goals, topics, and outlines provided by the College Board Advanced Placement Program. Using their guidelines, the instructor will set the curriculum for this class as the equivalent of a rigorous political science college class. This course will focus on issues in government and politics in the United States. The course outline contains a detailed list of topics in sequential order. Students should expect to achieve mastery on meet the standards and benchmarks. Students should enhance reading and writing skills. Students will learn the demanding pace of college classes, how to thoroughly examine materials and topics, and the amount of out-of-class time it takes to complete a college-level course. No matter the score achieved on the AP Exam, students should take away skills and knowledge that will prepare them to be successful college students after graduation. This course addresses the same standards as American Government, but in a more in-depth and rigorous study. Students are required to take the AP Government Exam in May.

3414 AP PSYCHOLOGY (1 semester = 1 credit) GRADES 11-12 ELECTIVE
PREREQUISITES: Teacher approval & ability to read a college-level textbook and write grammatically correct, complete sentences
MAXIMUM ENROLLMENT: 10 per section

This is an online course offered through Iowa Online Advanced Placement Academy (IOAPA). The AP Psychology course introduces students to the systematic and scientific study of human behavior and mental processes. While considering the psychologists and studies that have shaped the field, students explore and apply psychological theories, key concepts, and phenomena associated with such topics as the biological bases of behavior, sensation and perception, learning and cognition, motivation, developmental psychology, testing and individual differences, treatment of abnormal behavior, and social psychology. Throughout the course, students employ psychological research methods, including ethical considerations, as they use the scientific method, analyze bias, evaluate claims and evidence, and effectively communicate ideas. Students are required to take the AP Psychology Exam in May.

3834 AP MICROECONOMICS (1 semester = 1 credit) GRADES 11-12 ELECTIVE
PREREQUISITES: Teacher approval & ability to read a college-level textbook and should possess basic mathematics and graphing skills
MAXIMUM ENROLLMENT: 10 per section

This is an online course offered through Iowa Online Advanced Placement Academy (IOAPA). AP Microeconomics is an introductory college-level course that focuses on the principles of economics that apply to the functions of individual economic decision-makers. The course also develops students' familiarity with the operation of product and factor markets, distributions of income, market failure, and the role of government in promoting greater efficiency and equity in the economy. Students learn to use graphs, charts, and data to analyze, describe, and explain economic concepts. Students are required to take the AP Microeconomics Exam in May.

3835 AP MACROECONOMICS (1 semester = 1 credit) GRADES 11-12 ELECTIVE
PREREQUISITES: Teacher approval & ability to read a college-level textbook and should possess basic mathematics and graphing skills
MAXIMUM ENROLLMENT: 10 per section

This is an online course offered through Iowa Online Advanced Placement Academy (IOAPA). AP Macroeconomics is an introductory college-level course that focuses on the principles that apply to an economic system as a whole. The course places particular emphasis on the study of national income and price-level determination; it also develops students' familiarity with economic performance measures, the financial sector, stabilization policies, economic growth, and international economics. Students learn to use graphs, charts, and data to analyze, describe, and explain economic concepts. Students are required to take the AP Macroeconomics Exam in May.

3847 AP UNITED STATES HISTORY (1 Year = 2 credits) GRADES 11-12 ELECTIVE
PREREQUISITE: Teacher approval & ability to read a college-level textbook and write grammatically correct, complete sentences.
MAXIMUM ENROLLMENT: 10 per section

This is an online course offered through Iowa Online Advanced Placement Academy (IOAPA). AP United States History focuses on developing students' abilities to think conceptually about U.S. history from approximately 1491 to the present and apply historical thinking skills as they learn about the past. Seven themes of equal importance — identity; peopling; politics and power; work, exchange, and technology; America in the world; environment and geography; and ideas, beliefs, and culture — provide areas of historical inquiry for investigation throughout the course. These require students to reason historically about continuity and change over time and make comparisons among various historical developments in different times and places. Students are required to take the AP United States History Exam in May.

3848 AP STATISTICS (1 year = 2 credits) GRADES 11-12 ELECTIVE
PREREQUISITES: Teacher approval & students must have taken Algebra 2 before enrolling
MAXIMUM ENROLLMENT: 10 per section

This is an online course offered through Iowa Online Advanced Placement Academy (IOAPA). The AP Statistics course is equivalent to a one-semester, introductory, non-calculus-based college course in statistics. The course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. There are four themes in the AP Statistics course: exploring data, sampling and experimentation, anticipating patterns, and statistical inference. Students use technology, investigations, problem solving, and writing as they build conceptual understanding. Students are required to take the AP Statistics Exam in May.

AGRICULTURAL SCIENCE

3862 AG JOURNALISM & COMMUNICATIONS (1 semester = 1 credit) GRADES 9-12 ELECTIVE
PREREQUISITE: none
MAXIMUM ENROLLMENT: 20 per section

Basic journalism and communications for students seeking a practical application of expressing and communicating agricultural ideas. Students will discover the wide variety of career opportunities in ag broadcasting, graphic design, writers and editors, public relations specialists, and designers. Students will use technology to produce articles and electronic communication. Exploration on reading techniques for current events and non-fiction course work will be stressed and taught throughout the coursework. Participation in FFA is not required, but is strongly recommended. This course qualifies for FFA membership.

3787 INTRO TO AGRICULTURE, FOOD, & NATURAL RESOURCES 1 (1 year = 2 credits)

GRADES 9-12 ELECTIVE

PREREQUISITE: *none*

MAXIMUM ENROLLMENT: *24 per section*

This introductory agriculture class gives students a taste of everything that agriculture has to offer. The class begins by explaining the importance of agriculture and its industry in our state, country, and world. Students are shown the variety of areas and career opportunities involved within the agricultural field. A unit over FFA is covered, explaining the history, guiding principles, and opportunities of the national organization. Students are also introduced to parliamentary procedure during this time, learning the proper ways to conduct business at meetings. The second half of the class focuses on basic animal science, covering the animal systems, common livestock breeds, and the importance of the animal industry and its many products. Participation in FFA is not required, but is strongly recommended. **This course is the first needed in order to take other agricultural classes offered & must be taken for FFA membership.*

3789 INTRO TO AGRICULTURE, FOOD, & NATURAL RESOURCES 2 (1 year = 2 credits)

GRADES 10-12 ELECTIVE

PREREQUISITE: *Introduction to Agriculture, Food, & Natural Resources 1*

MAXIMUM ENROLLMENT: *20 per section*

Agriculture 2's primary focus is plant science and natural resources. The first semester is spent looking into plant science in-depth and covering common crops grown in our area, as well as around the world. Second semester highlights wildlife and natural resources and their importance. Students learn about the wildlife industry, protecting it, and using it wisely. Recreational wildlife use is also covered, including fishing, hunting, and trapping. Participation in FFA is not required, but is strongly recommended. This course qualifies for FFA membership.

3757 SMALL ANIMAL VET CARE (1 semester = 1 credit)

GRADES 10-12 ELECTIVE

PREREQUISITE: *Introduction to Agriculture, Food, & Natural Resources 1*

MAXIMUM ENROLLMENT: *20 per section*

Small Animal Vet focuses on the pet industry. Topics covered include the U.S. pet industry, careers with small animals, animal rights and welfare, and animal safety. Students then learn more about the breeds, care, feeding, diseases, and reproduction of common pet species, such as dogs, cats, rabbits, and many more. Participation in FFA is not required, but is strongly recommended. This course qualifies for FFA membership.

3752 ADVANCED ANIMAL SCIENCE (1 semester = 1 credit)

GRADES 10-12 ELECTIVE

PREREQUISITE: *Introduction to Agriculture, Food, & Natural Resources 1*

MAXIMUM ENROLLMENT: *20 per section*

This class goes further into depth about animal science topics covered in Introduction to Agriculture, Food, & Natural Resources 1. Students learn more about the biotechnology side of the field, including genetics, artificial insemination, and embryo transfer. Food safety and security is also covered, including meat science. Participation in FFA is not required, but is strongly recommended. This course qualifies for FFA membership.

3753 AGRICULTURE BUSINESS MANAGEMENT (1 semester = 1 HS & 3.0 IWCC credits) GRADES 11-12 ELECTIVE

PREREQUISITE: *Introduction to Agriculture, Food, & Natural Resources 1 & 2*

MAXIMUM ENROLLMENT: *15 per section*

Farm Business Management examines the business and economic principles applied to decision-making and problem-solving in the management of a farm business. Students learn about cash flow, partial, enterprise, and whole farm budgeting. Additional topics include: information systems for farm accounting, analysis, and control; obtaining and managing land, capital, and labor resources; and alternatives for farm business organizations. This is Iowa Western Community College's course #AGB 330. Participation in FFA is not required, but highly recommended. This course qualifies for FFA membership.

3756 **LEADERSHIP & DEVELOPMENT** (1 semester = 1 credit)

GRADES 11-12 ELECTIVE

PREREQUISITE: Introduction to Agriculture, Food, & Natural Resources 1

MAXIMUM ENROLLMENT: 20 per section

Leadership is for students striving to become better leaders through the development of personal and group skills. Students will look into the different personality traits, leadership styles, group dynamics, followership skills, team building, public speaking, and self-concept. The class will also complete a service project during the semester. This class is highly recommended for FFA officers, as well as any other student looking to improve their ability to lead and influence others. Participation in FFA is not required, but is strongly recommended. This course qualifies for FFA membership.

3754 **FALL HORTICULTURE** (1 semester = 1 credit)

GRADES 10-12 ELECTIVE

PREREQUISITE: Introduction to Agriculture, Food, & Natural Resources 1

MAXIMUM ENROLLMENT: 15 per section

This class focuses on plant science and incorporates working in the greenhouse to apply students' learning hands-on. Fall Horticulture's main project is raising 300+ poinsettias in the greenhouse to sell the community. The semester long project includes experimenting with different varieties of poinsettias and growing medium. Students also learn about horticulture careers, plant propagation, greenhouse structures, and common plant pests. Participation in FFA is not required, but is strongly recommended. This course qualifies for FFA membership.

3755 **SPRING HORTICULTURE** (1 semester = 1 credit)

GRADES 10-12 ELECTIVE

PREREQUISITE: Introduction to Agriculture, Food, & Natural Resources 1

MAXIMUM ENROLLMENT: 15 per section

This class focuses on plant science and incorporates working in the greenhouse to apply students' learning hands-on. Spring Horticulture's main project is starting 50+ varieties of annual flower and vegetable seeds to sell to the community. Students decide on the plants to grow, germinate them from seed, and transplant as needed until they are ready to sell. Over 100 hanging baskets are also made and cared for during this time. Other topics include horticulture careers, landscape design, floriculture, tree pruning, and plant propagation. Participation in FFA is not required, but is strongly recommended. This course qualifies for FFA membership.

3793 **INTRO TO AG & CONSTRUCTION TECHNOLOGY** (1 year = 2 credits)

GRADE 9 ELECTIVE

PREREQUISITE: none

MAXIMUM ENROLLMENT: 15 per section

Basic Agricultural/Construction Mechanics is an introductory course that explores a wide variety of mechanical processes. Students will use scientific and mathematical applications through relevant mechanical topics. In addition, students will complete numerous lab-based and project-based activities that will give students the opportunity to develop an understanding of the scientific process and increase hand-eye coordination and motor skills. Areas of study in this course include careers in agriculture/construction mechanics, mechanical safety and hazards, hand and power tools. Topic clusters in this course include electricity, plumbing, masonry, welding and metal work, wood construction, and mechanical technology. Students will develop 21st century skills to increase employability. Participation in FFA student organization activities and Supervised Agricultural Experience (SAE) projects is an integral course component for leadership development, career exploration, and reinforcement of academic concepts.

BUSINESS

COMPUTER SCIENCE & CODING

(1 semester = 1 credit)

GRADES 10-12 ELECTIVE

PREREQUISITE: Algebra 1

MAXIMUM ENROLLMENT: 12 per section

The course introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. The course is designed with the goal of creating leaders in computer science fields and attracting and engaging those who are traditionally underrepresented with essential computing tools and multidisciplinary opportunities.

3770 **ACCOUNTING 1**

(1 year = 2 credits)

GRADES 10-12 ELECTIVE

PREREQUISITE: none

MAXIMUM ENROLLMENT: 24 per section

This accounting course introduces and then expands upon the fundamental accounting procedures used in small businesses. The first year covers the full accounting cycle and incorporates topics such as payroll, taxes, debts, depreciation, ledger and journal techniques, and periodic adjustments. Students may learn how to apply standard auditing principles to the projects they work on and may prepare budgets and final reports. Calculators, electronic spreadsheets or other automated tools may be used. Completion of a practice set is included.

3771 **ACCOUNTING 2**

(1 year = 2 credits)

GRADES 11-12 ELECTIVE

PREREQUISITE: Teacher permission only

MAXIMUM ENROLLMENT: 18 per section

This accounting course expands upon the fundamental accounting procedures used in small businesses. The advanced course includes departmentalized accounting, branch accounting, several advanced accounting adjustments, cost accounting, corporate financing, and accounting for business decisions. The utilization of computerized accounting is introduced and expanded. Completion of an automated practice set is included.

3773 **INTRODUCTION TO BUSINESS**

(1 semester = 1 credit)

GRADES 9-12 ELECTIVE

PREREQUISITE: none

MAXIMUM ENROLLMENT: 24 per section

Students develop skills relating to general business situations. The course concentrates on units dealing with the concepts and processes associated with successful entrepreneurship. Topics also include budgeting, banking, credit, insurance, taxes, and living on your own.

3775 **OFFICE 2013**

(1 semester = 1 HS & 3.0 IWCC credits) GRADES 11-12 ELECTIVE

RECOMMENDED PREREQUISITE: keyboarding skills

MAXIMUM ENROLLMENT: 7 per section

Office 2013 consists of a hands-on introduction to microcomputer hardware, operating systems, and application software, and navigation of the Internet. Students will learn to manage system hardware and system software, as well as maintain a computer system. Students will also learn to navigate and publish content to the Web, as well as the dangers, and risks associated with sharing content to the Web. Students will enter, Modify, and manipulate data with word processing, spreadsheet, database, and presentation programs. Students should be familiar with the standard keyboard. This is Iowa Western Community College's course #BCA 212.

3778 **RECORDKEEPING** (1 semester = 1 credit) GRADES 9-12 ELECTIVE
PREREQUISITE: none
MAXIMUM ENROLLMENT: 24 per section
Students develop skills relating to general record keeping in business or personal life. Daily lessons include cashier records, petty cash, budgets, retail sales, purchases, payroll, checks, and bank statements. This program is designed to utilize realistic business problems so that students can acquire basic entry-level record keeping skills needed and office occupations. Students who have successfully completed Accounting I should not enroll in this course.

3861 **DESKTOP PUBLISHING** (2 semesters = 2 credits) GRADES 9-12 ELECTIVE
PREREQUISITE: Teacher Approval
MAXIMUM ENROLLMENT: 8 per section
This is an introductory course that provides students with a basic understanding of the field of desktop publishing software and presentation software to create business publications and presentations for our school and local community. Additional topics may include design, word processing, and the use of extra equipment. Course work will include course demonstrations, laboratory exercises, and projects that are deadline-oriented.

INTRO TO COMPUTER SCIENCE(1 semester or 1 year = 1 or 2 credits) GRADE 9 ELECTIVE
PREREQUISITE: Teacher Approval
MAXIMUM ENROLLMENT: 10 per section
This is an interactive introductory course for students brand new to programming that teaches the foundations of computer science using the Python language. This is a web-based video class. Not only will this semester- or year-long course prepare students for AP Computer Science A and AP Computer Science Principles, but it will teach students how to think computationally and solve complex problems, skills that are important for every student.

FAMILY & CONSUMER SCIENCE

3701 **FOODS 1** (1 semester = 1 credit) GRADES 9-12 ELECTIVE
PREREQUISITE: none
MAXIMUM ENROLLMENT: 20 per section
Foods 1 and 2 explore the basics of food safety and sanitation, food preparation, and nutrition.

3702 **FOODS 2** (1 semester = 1 credit) GRADES 9-12 ELECTIVE
PREREQUISITE: Foods 1
MAXIMUM ENROLLMENT: 20 per section
Foods 1 and 2 explore the basics of food safety and sanitation, food preparation, and nutrition.

3703 **CULINARY ARTS** (1 semester = 1 credit) GRADES 10-12 ELECTIVE
PREREQUISITE: Foods 1 & Foods 2
MAXIMUM ENROLLMENT: 20 per section
Culinary Arts class challenges students' skill levels by preparing advanced recipes while also exploring careers within culinary industry.

3704 **WORLD FOODS** (1 semester = 1 credit) GRADES 10-12 ELECTIVE
PREREQUISITE: Foods 1 & Foods 2
MAXIMUM ENROLLMENT: 20 per section
World Foods integrates geographical perspectives with cultural traditions and foods.

- 3705 **INDEPENDENT LIVING** (1 semester = 1 credit) GRADES 11-12 ELECTIVE
PREREQUISITE: none
MAXIMUM ENROLLMENT: 25 per section
 This course will help students prepare for life after high school. Topics discussed include career preparation, personal budgeting, and securing a living space. Students also learn skills such as food preparation, laundry, and basic clothing repair skills.
- 3706 **CHILD DEVELOPMENT** (1 semester = 1 credit) GRADES 10-12 ELECTIVE
PREREQUISITE: none
MAXIMUM ENROLLMENT: 20 per section
 This course presents the skills, demands, challenges, and responsibilities of parenthood or working with children. It explores the decision making process and adjustment of parenthood as well as the physical, social, emotional, and intellectual development that occurs from infancy through adolescence. The course does include classroom/preschool experience.
- 3707 **CLOTHING 1** (1 semester = 1 credit) GRADES 9-12 ELECTIVE
PREREQUISITE: none
MAXIMUM ENROLLMENT: 18 per section
 This course expands student knowledge of the textile and clothing industry and careers available within it. Textiles are studied from fiber to fabric and their many uses. Students will explore the fashion industry and clothing design. Students will improve their skills in clothing construction by making several items of clothing for themselves or another person.
- 3708 **CLOTHING 2** (1 semester = 1 credit) GRADES 10-12 ELECTIVE
PREREQUISITE: Clothing 1
MAXIMUM ENROLLMENT: 18 per section
 This course expands student knowledge of the textile and clothing industry and careers available within it. Textiles are studied from fiber to fabric and their many uses. Students will explore the fashion industry and clothing design. Students will improve their skills in clothing construction by making several items of clothing for themselves or another person.
- 3709 **FAMILY RELATIONS** (1 semester = 1 credit) GRADES 9-12 ELECTIVE
PREREQUISITE: none
MAXIMUM ENROLLMENT: 25 per section
 This course explores the influences of society on individuals and families. It is designed to assist students to be self-sufficient as related to career and life management, personal, professional relationships, and marriage. Students will learn effective skills to balance the roles of work with individual and family needs.
- 3710 **HOUSING & INTERIORS** (1 semester = 1 credit) GRADES 9-12 ELECTIVE
PREREQUISITE: none
MAXIMUM ENROLLMENT: 25 per section
 This course covers many aspects of housing including: the history of housing, housing styles, and floor plan design. Color schemes, room arrangements, and design skills are also topics studied. The final project is creating a presentation board for a client's wants and needs, in which students will present.

FINE ARTS

- 3606 **ART 1: INTRO TO DRAWING & PAINTING** (1 semester = 1 credit) GRADES 9-12 ELECTIVE
PREREQUISITE: none
MAXIMUM ENROLLMENT: 18 per section
Students will learn the Elements of Design, and learn basic drawing and painting techniques through pencil, color pencil, charcoal, ink, watercolor and acrylic paints. The grid system will be taught so students can properly enlarge a photograph.
- 3607 **ART 2: INTRO TO CERAMICS** (1 semester = 1 credit) GRADES 9-12 ELECTIVE
PREREQUISITE: none
MAXIMUM ENROLLMENT: 15 per section
Students will learn four methods of building in ceramics: pinch pottery, coil pottery, slab and throwing on the potter's wheel. In addition, students will learn printmaking techniques such as mono printing, embossing, and linoleum print.
- 3610 **PAINTING** (1 semester = 1 credit) GRADES 10-12 ELECTIVE
PREREQUISITE: Art 1
MAXIMUM ENROLLMENT: 15 per section
Painting students expand their use of the elements and principles of design studied in Art 1. Students will explore a variety of painting media as they work with more complex ideas, and depth of issues, form and concept.
- 3637 **DRAWING** (1 semester = 1 credit) GRADES 10-12 ELECTIVE
PREREQUISITE: Art 1
MAXIMUM ENROLLMENT: 18 per section
Students will study the principals of design and create works of art in a variety of media. Human and animal forms will be studied.
- 3638 **3-D SCULPTURE** (1 semester = 1 credit) GRADES 10-12 ELECTIVE
PREREQUISITE: Art 2
MAXIMUM ENROLLMENT: 14 per section
Using methods taught in Art II, students will create sculptures out of many types of media such as clay, paper mache, wire, and found objects.
- 3639 **ART PORTFOLIO** (1 semester = 1 credit) GRADE 12 ELECTIVE
PREREQUISITE: all offered Art classes & Teacher approval
MAXIMUM ENROLLMENT: none
Students must have taken all of the above listed classes. This may only be taken as a senior and *teacher must sign student into the class*. This is a self-directed class to build a college portfolio. Students will have a select number of pieces to show at contest.
- 3611 **CHOIR** (1 year = 2 credits) GRADES 9-12 ELECTIVE
PREREQUISITE: none
MAXIMUM ENROLLMENT: 120
Choir is a large choral performing group available for all high school singers, regardless of previous experience. This ensemble focuses on part-reading and singing, music terminology, large group ensemble performance technique, tone, vocal technique, and vocal health. It offers a variety of vocal music literature and represents the school in public concerts, contests, and school performances. Choir meets daily. Students can be in both instrumental and vocal music.

- 3614 **INDIVIDUAL VOCAL TECHNIQUE/CHAMBER CHOIR** (1 semester = 1 credit) GRADES 9-12 ELECTIVE
PREREQUISITE: enrollment in Choir, teacher placement/audition
MAXIMUM ENROLLMENT: 28
 During the first quarter, the students involved in Individual Vocal Techniques will be concentrating their efforts on developing vocal techniques consistent with the following: Independent a capella singing in SATB quartets, development of musicianship, and high level thinking and performance skills. Second quarter, as well as second semester, the students will continue working as a performance group (chamber choir). This auditioned choir will work on high level pieces of music.
- 3612 **BAND** (1 year = 2 credits) GRADES 9-12 ELECTIVE
PREREQUISITE: 7/8 Band or summer lessons
MAXIMUM ENROLLMENT: none
 Courses in Band are intended to develop technique for playing brass, woodwind, and percussion instruments, marching style and to cover appropriate band literature styles for marching and concert performances.
- 3613 **INDEPENDENT BAND** (1 semester = 1 credit) GRADES 9-12 ELECTIVE
PREREQUISITE: 7/8 Band
MAXIMUM ENROLLMENT: none
 The independent band course is offered in the fall for students wishing to audition for all-state band. Students taking this course will have personal assistance from the teacher and additional time to practice.
- 3642 **JAZZ BAND** (1 semester = 1 credit) GRADES 9-12 ELECTIVE
PREREQUISITE: enrollment in Band
MAXIMUM ENROLLMENT: none
 The Jazz Band course is intended to develop technique for playing instruments in the jazz style. Depending on enrollment, the course may concentrate on solo performance and improvisation or be a rehearsal time for the Jazz Band.
- 3643 **MUSIC THEORY** (1 semester = 1 credit) GRADES 9-12 ELECTIVE
RECOMMENDED PREREQUISITE: ability to read music
MAXIMUM ENROLLMENT: 15 per section
 Music Theory is intended to present the basic concepts of music from notation to tonality with an emphasis on analyzing music.
- 3646 **AMERICAN MUSIC HISTORY** (1 semester = 1 credit) GRADES 9-12 ELECTIVE
PREREQUISITE: none
MAXIMUM ENROLLMENT: 15 per section
 American Music History studies the history of music in the United States and influences on that music from other countries. Units include music from folk and classical, Broadway, jazz, rock, hip-hop and R&B.

FOREIGN LANGUAGE

Please note: Spanish is not required for graduation from Shenandoah High School, though different amounts are required for admission to various colleges. The most commonly required amount is 2 years of any single foreign language; however, an increasing number of colleges are requiring 3 years.

3602 SPANISH 1 (1 year = 2 credits) GRADES 9-12 ELECTIVE

PREREQUISITE: none

MAXIMUM ENROLLMENT: 25 per section

This Spanish is for beginners. Students will learn vocabulary and grammatical functions in the present tense related to basic topics: introducing and describing one's self, classes, friends, and family. Various cultural topics will also be included throughout the year. As activities and assessments are given via a variety of print and electronic sources, the ability to work independently and study regularly is required.

3603 SPANISH 2 (1 year = 2 credits) GRADES 10-12 ELECTIVE (9 if Spanish is spoken in the home)

PREREQUISITE: Spanish 1 (with a grade of C or higher in Spanish 1)

MAXIMUM ENROLLMENT: 25 per section

Students will build upon what was learned the previous year, adding such topics as food and at the restaurant, clothing, and body parts. As activities and assessments are given via a variety of print and electronic sources, the ability to work independently and study regularly is required.

3625/3627 SPANISH 3 & 4 (1 year each = 2 credits) GRADES 11-12 ELECTIVE

SPANISH 3 PREREQUISITE: Spanish 1 & 2, or 2 only for heritage speakers (with a grade of C or higher in all prior semesters)

SPANISH 4 PREREQUISITE: Spanish 1, 2, 3, or 2 & 3 for heritage speakers (with a grade of C or higher in all prior semesters)

MAXIMUM TOTAL ENROLLMENT: 25 per section

Spanish 3 & 4 is a combined, upper-level Spanish class that is mainly project-based and student-driven. The goal is to increase a student's ability to read, write, listen, and speak in Spanish on a variety of topics. Content varies every other year so that a 4-year student receives instruction on culture and geography as well as vocabulary and grammar. Field trips are possible, and a Spanish food cooking unit is done during second semester each year. Students taking Spanish 3 & 4 must be self-driven and willing to make mistakes in order to learn.

HEALTH SCIENCE

PRINCIPLES OF HEALTH SCIENCE (1 semester = 1 credit) GRADES 9-12 ELECTIVE

PREREQUISITE: none

MAXIMUM ENROLLMENT: 20

The Principles of Health Science provides an overview of the therapeutic, diagnostic, health informatics, support services, and biotechnology research and development systems of the health care industry. To pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, and communicate effectively. Students should recognize that quality health care depends on the ability to work well with others. The health science industry is comprised of diagnostic, therapeutic, health informatics, support services, and biotechnology research and development systems that function individually and collaboratively to provide comprehensive health care. Students should identify the employment opportunities, technology, and safety requirements of each system. Students are expected to apply the knowledge and skills necessary to pursue a health science career through further education and employment. Professional integrity in the health science industry is dependent on acceptance of ethical and legal responsibilities. Students are expected to employ their ethical and legal responsibilities and limitations and understand the implications of their actions. **Recommend course prior to enrolling in Health Science Course at IWCC (Including Introduction to Health Occupations, Medical Terminology, and Certified Nurse Assistant Courses).

3812 **INTRODUCTION TO HEALTHCARE OCCUPATIONS** (1 semester = 1 HS & 2.0 IWCC credits) GRADES 11-12 ELECTIVE

PREREQUISITE: none

MAXIMUM ENROLLMENT: 20 per section

Introduction to Healthcare Occupations introduces the professional expectations of the healthcare industry. Select health careers will be introduced to explore the clinical realm while comparing today's healthcare with the future of this industry. Behavioral expectations of the industry are emphasized and compared to the academic expectations/experiences in preparation for a future in the industry. Course requirements include proof of immunizations, tuberculosis (TB) skin testing, and out-of-pocket costs. This is Iowa Western Community College's course #HSC 105.

3813 **CERTIFIED NURSE ASSISTANT** (1 semester = 1.5 HS & 3.0 IWCC credits) GRADES 11-12 ELECTIVE

RECOMMENDED PREREQUISITE: Introduction to Healthcare Occupations I & Medical Terminology

MAXIMUM ENROLLMENT: 10 per section, preference given to seniors

This course is designed to provide knowledge and skills to work in a nursing home, home health care agency, or group home and/or hospital. The course is held in a classroom/lab and a minimum 30 hours of clinical will be in a nursing home. You will give patient care under the supervision of you instructor. During the course, health care entry level skills and behaviors to see employment will be covered: communication, interaction, ethical/legal principles, safety measures, personal hygiene, special procedures, and CPR certification. Course requirements include out-of-pocket costs, criminal/abuse background check, immunizations, tuberculosis (TB) skin testing, and a flu vaccine. This is Iowa Western Community College's course #HSC-172.

This course is intended to prepare students for the Direct Care Worker Registry written and skills exam. The exams are to obtain certification and be eligible for employment as required by State Legislation.

*It is a recommended course and a starting point for anyone considering a healthcare career; it is typically a prerequisite for admission to nursing programs.

3815 **MEDICAL TERMINOLOGY** (1 semester = 1 HS & 2.0 IWCC credits) GRADES 11-12 ELECTIVE

PREREQUISITE: none

MAXIMUM ENROLLMENT: 20 per section

Medical Terminology studies terms used in medicine. This course gives students a working knowledge of the roots, prefixes and suffixes of commonly used medical terms. Emphasis centers on the correct spelling and pronunciation of the vocabulary. Course requirements include out-of-pocket costs. This is Iowa Western Community College's course #HSC 113.

INDUSTRIAL TECHNOLOGY

3721 **WOODWORKING 1** (1 year = 2 credits) GRADES 9-12 ELECTIVE

PREREQUISITE: none

MAXIMUM ENROLLMENT: 15 per section

To introduce students to various kinds of lumber used industry, and offer experience in using selected woodworking tools. Student's design and construct three separate required projects and prepare a bill of material for each. Accurate and safe use of tools, equipment and procedures are emphasized. Developing skills and becoming familiar with various types of wood finishing materials and their applications. As students advance within the class, a fourth project may be produced.

- 3722 **WOODWORKING 2** (1 semester = 1 credit) GRADES 10-12 ELECTIVE
PREREQUISITE: Woodworking 1 or IACT
MAXIMUM ENROLLMENT: 15 per section
 In this class, students will learn terminology of furniture or cabinetry parts with an understanding of the various construction methods used in industry. Students are allowed to construct a project of their choice. Students learn to layout their project while gaining maximum use of the material. Students learn the machining processes uses in cabinetry construction as well as the assembly and sanding techniques. Staining and finishing techniques are presented, and each student demonstrates his ability to apply a spray finish to their project.
- 3727 **METALS 1** (1 semester = 1 credit) GRADES 9-12 ELECTIVE
PREREQUISITE: none
MAXIMUM ENROLLMENT: 6 per section
 These courses introduce students to the properties, uses and applications of various metals. Welding courses provide experience in various processes used to join and cut metal (such as oxyacetylene, shielded metal arc, metal inert gas and the proper use of technique. Courses often included instruction interpreting blueprints or other types of specifications.
- 3728 **METALS 2** (1 semester = 1 credit) GRADES 9-12 ELECTIVE
PREREQUISITE: Metals I
MAXIMUM ENROLLMENT: 6 per section
 These courses introduce students to the properties, uses and applications of various metals. Welding courses provide experience in various processes used to join and cut metal (such as oxyacetylene, shielded metal arc, metal inert gas and the proper use of technique and safety practices. Courses often included instruction interpreting blueprints or other types of specifications.
- 3781 **CONSTRUCTION TECHNOLOGY** (1 year = 4 credits) GRADES 9-12 ELECTIVE
PREREQUISITE: none
MAXIMUM ENROLLMENT: 8 per section
 The goal of this class is to provide students with a basic knowledge of carpentry and related skills used in the residential construction industry. Residential construction involves the building or remodeling of homes, apartments and similar structures. The program provides the opportunity to learn and apply themselves to all phase of the industry with an emphasis on carpentry and the related areas of HVAC, blueprint reading and mathematics.
- 3791 **DRAFTING** (1 semester = 1 credit) GRADES 9-12 ELECTIVE
PREREQUISITE: none
MAXIMUM ENROLLMENT: 12 Licensed Seats
 This is an introductory course for students in the techniques of technical drawing. This course serves as a general education purpose to help students develop their capacity to analyze, organize and accurately express them graphically. Also serves as a preparatory class for students wishing to prepare themselves for gainful employment in drafting or plan to continue their education in engineering or a technical/trade school. We will have 1 semester of board drafting followed by Solid works CAD program.

3793 **INTRO TO AG & CONSTRUCTION TECHNOLOGY** (1 year = 2 credits)

GRADE 9 ELECTIVE

PREREQUISITE: none

MAXIMUM ENROLLMENT: 15 per section

Basic Agricultural/Construction Mechanics is an introductory course that explores a wide variety of mechanical processes. Students will use scientific and mathematical applications through relevant mechanical topics. In addition, students will complete numerous lab-based and project-based activities that will give students the opportunity to develop an understanding of the scientific process and increase hand-eye coordination and motor skills. Areas of study in this course include careers in agriculture/construction mechanics, mechanical safety and hazards, hand and power tools. Topic clusters in this course include electricity, plumbing, masonry, welding and metal work, wood construction, and mechanical technology. Students will develop 21st century skills to increase employability. Participation in FFA student organization activities and Supervised Agricultural Experience (SAE) projects is an integral course component for leadership development, career exploration, and reinforcement of academic concepts.

LANGUAGE ARTS

3300 **LANGUAGE ARTS 9**

(1 year = 2 credits)

GRADE 9 REQUIRED

PREREQUISITE: none

MAXIMUM ENROLLMENT: 25 per section

Language Arts 9 builds upon the student's prior knowledge of grammar, vocabulary, word usage, reading strategies, and the mechanics of writing, and includes extensive reading and writing. Students study various literary genres and complete related writing and vocabulary exercises. A library unit emphasizing the access and evaluation of materials is also a part of the course.

3301 **LANGUAGE ARTS 10**

(1 year = 2 credits)

GRADE 10 REQUIRED

PREREQUISITE: Language Arts 9

MAXIMUM ENROLLMENT: 24 per section

Language Arts 10 builds upon the student's prior knowledge of grammar, vocabulary, word usage, reading strategies, and the mechanics of writing, and includes extensive reading and writing. Students study various literary genres and complete related writing and vocabulary work. Students will begin work on career-related investigation and writing skills.

3302 **LANGUAGE ARTS 11**

(1 year = 2 credits)

GRADE 11 REQUIRED

PREREQUISITE: Language Arts 10

MAXIMUM ENROLLMENT: 24 per section

Language Arts 11 builds upon the student's prior knowledge of grammar, vocabulary, word usage, reading strategies, and mechanics of writing, and includes extensive reading and writing. Students study American informational and literary texts and complete related writing and vocabulary exercises to examine how authors and their works influence history. The research writing process is an additional focus of the course, with students working to write a research paper.

3303 **COMMUNICATIONS**

(1 semester = 1 credit)

GRADE 10-12 ELECTIVE

PREREQUISITE: none

MAXIMUM ENROLLMENT: 20 per section

Communication offers students the opportunity to learn how to employ oral skills in formal and informal situations. Students will learn the proper presentation techniques and organization of a variety of types of speeches. Students will also learn effective verbal and nonverbal communication skills in interpersonal communication situations. Additional study will be based on effective organization techniques and strategies, gathering information from a variety of sources, and evaluating and crediting sources.

ENGLISH LITERATURE

(1 semester = 1 credit)

GRADES 11-12 ELECTIVE

*PREREQUISITE: Language Arts 10**MAXIMUM ENROLLMENT: 24 per section*

This course emphasizes comprehension and critical thinking skills in the reading of English Literature. Its historical and chronological based content is intended for students whose career pathway includes post-secondary college/university attendance. Literary techniques are explored through two or more literary genres. Writing assignments/projects are required as a method of further developing and improving critical thinking and analytical skills. Discussion based on reflective writing is an integral part of the course.

ACADEMIC COMP & RESEARCH

(1 semester = 1 credit)

GRADE 12 REQUIRED

*PREREQUISITE: Language Arts 11**MAXIMUM ENROLLMENT: 24 per section*

This composition and research course is designed primarily for students whose future plans include post-secondary college/university education. It builds upon previously learned writing skills. Reinforcing the logic and critical thinking skills that accompany good writing, this course provides continued and advanced instruction in writing for a variety of purposes and audiences. Writings may include but are not limited to argumentation, comparison-contrast, description, and personal narration. Literary research is the main focus for the research component.

RESEARCH & TECHNICAL WRITING (1 semester = 1 credit)

GRADE 12 REQUIRED

*PREREQUISITE: Language Arts 11**MAXIMUM ENROLLMENT: 24 per section*

This writing course prepares students to write research papers and/or technical reports. It emphasizes researching (primary & secondary sources), organizing (materials, thoughts, and arguments), and writing in a persuasive or technical style. This course can substitute for the Academic Composition & Research course.

3321 LANGUAGE ARTS DEVELOPMENT (1 year = 2 credits)

GRADES 9-12 ELECTIVE

*PREREQUISITE: Can only be taken concurrently with another Language Arts course; prior approval of teacher(s) required**MAXIMUM ENROLLMENT: 15 per section*

Language Arts Development is designed for the teacher to select and teach only the appropriate standards corresponding to a student's grade level and/or instructional needs in relation to the other Language Arts courses the student is enrolled in. The curriculum of the course will vary for each enrolled student, but major areas of focus will include reading comprehension and strategies, grammar usage and conventions, vocabulary acquisition, study skills and strategies, and writing skills.

MATHEMATICS**3102 ALGEBRA 1**

(1 year = 2 credits)

GRADES 9-12 REQUIRED

*PREREQUISITE: none**MAXIMUM ENROLLMENT: 25 per section*

This course is designed to teach fundamental concepts of Algebra in depth, preparing students for future math and/or related courses. The course includes a study of numbers, expressions, functions, and statistics.

3103 GEOMETRY

(1 year = 2 credits)

GRADES 9-12 ELECTIVE

*PREREQUISITE: Algebra 1**MAXIMUM ENROLLMENT: 25 per section*

This course will emphasize an abstract and formal approach to Geometry. This will include topics such as properties of plane and solid figures; deductive methods of logic; geometry as an axiomatic system including the study of postulates, theorems, and form congruence, similarity, parallelism, and perpendicularity; and rules of angle measurement in trigonometry, coordinate geometry, and transformational geometry.

- 3104 **ALGEBRA 2** (1 year = 2 credits) GRADES 9-12 ELECTIVE
PREREQUISITE: Geometry
MAXIMUM ENROLLMENT: 25 per section
 This course introduces many new concepts and is geared for the college bound student. An understanding of the principles of algebra and problem solving skills is emphasized. Topics covered include logarithmic functions, rational and radical functions, functions/inverses, variation, exponential trigonometry, and statistics.
- 3105 **BUSINESS MATH** (1 semester = 1 credit) GRADES 11-12 ELECTIVE
PREREQUISITE: none
MAXIMUM ENROLLMENT: 20 per section
 In this course, students will study mathematical concepts with real-world, practical applications. All of the concepts covered could be utilized by the 21st century consumer throughout their adult life. After completion of many of the topics of the course, a real-world project will summarize the concepts learned regarding the recently covered topic. Topics to be explored during the course include: money management including banking services, payroll, taxes and insurance, consumer purchasing, interest accumulation as it pertains to both savings and loans, and depreciation. All aspects of the course require a calculator for computation, thus students enrolling in the class are required to provide their own calculator.
- 3106 **DISCRETE MATH** (1 semester = 1 credit) GRADES 10-12 ELECTIVE
PREREQUISITE: Algebra 2
MAXIMUM ENROLLMENT: 20 per section
 In this course, students will explore advanced mathematical concepts not introduced in other courses offered. Some of the topics to be covered include logic, set theory, matrices, and vectors.
- 3108 **CALCULUS** (1 semester = 1 credit) GRADE 12 ELECTIVE
PREREQUISITE: Trigonometry & Discrete Math
MAXIMUM ENROLLMENT: 15 per section
 This Calculus course is intended for students who have attained pre-calculus objectives through prerequisite courses Trigonometry and Discrete Math. In this course the student will study limits, derivatives, and applications of calculus. The use of graphing calculators is a key component in this class. It is strongly encouraged to purchase your own graphing calculator for use in this course.
- 3112 **ACT PREP MATH** (1 semester = 1 credit) GRADES 10-12 ELECTIVE
PREREQUISITE: Algebra 2
MAXIMUM ENROLLMENT: 25 per section
 This course covers the front end of the high school math curriculum, including: Pre-Algebra, basic and intermediate algebra, plane and coordinate geometry, and basic trigonometry. In covering the material from Pre-Algebra to Algebra 2, this course provides an effective review for the ACT.
- 3113 **TRIGONOMETRY** (1 semester = 1 credit) GRADES 10-12 ELECTIVE
PREREQUISITE: Algebra 2
MAXIMUM ENROLLMENT: 20 per section
 Students first review the measures of angles, arc lengths and sectors of circles, and then are introduced to the definitions of sine, cosine, tangent, secant, cosecant, and cotangent. The definitions will be presented initially using right triangles and the unit circle, while using the unit circle the students will become more aware of the periodicity of the trig functions and how they can be graphed. After this initial setup, students will learn how to graph certain equations based on scale changes and translations, and develop equations from the graphs as well. Modeling using trig functions will also be developed in this course.

3114 STATISTICS

(1 semester = 1 credit)

GRADES 10-12 ELECTIVE

*PREREQUISITE: Algebra 2**MAXIMUM ENROLLMENT: 20 per section*

In this course, students will be introduced to the major concepts of probability, interpretation of data, and statistical problem solving. Students will learn the course concepts through hands-on experimentation and investigation. They will analyze existing data as well as data collected through a survey, observational study or experiment. They will then display the data in different ways, analyze it, and draw conclusions based on the results. The four main components of the course are: exploring data, data collection, probability, and inference.

3115 MATH MODELING

(1 semester = 1 credit)

GRADES 10-12 ELECTIVE

*PREREQUISITE: Algebra 2**MAXIMUM ENROLLMENT: 20 per section*

Students are introduced to the world of applied mathematics through the study of the process of mathematical modeling. This process which connects mathematics to the real world, involves four steps: 1) identification of a "real world" problem, 2) the reduction of the problem to an equation or mathematical model, 3) the performance of a mathematical solution, and finally, 4) the interpretation of the solution within the context of the problem. An appreciation for the power and beauty of mathematics is pursued through the application of mathematical modeling to a variety of problems including, but not limited to, political science, economics, sports, ecology, biological and physical sciences.

3129 ALGEBRA TOPICS

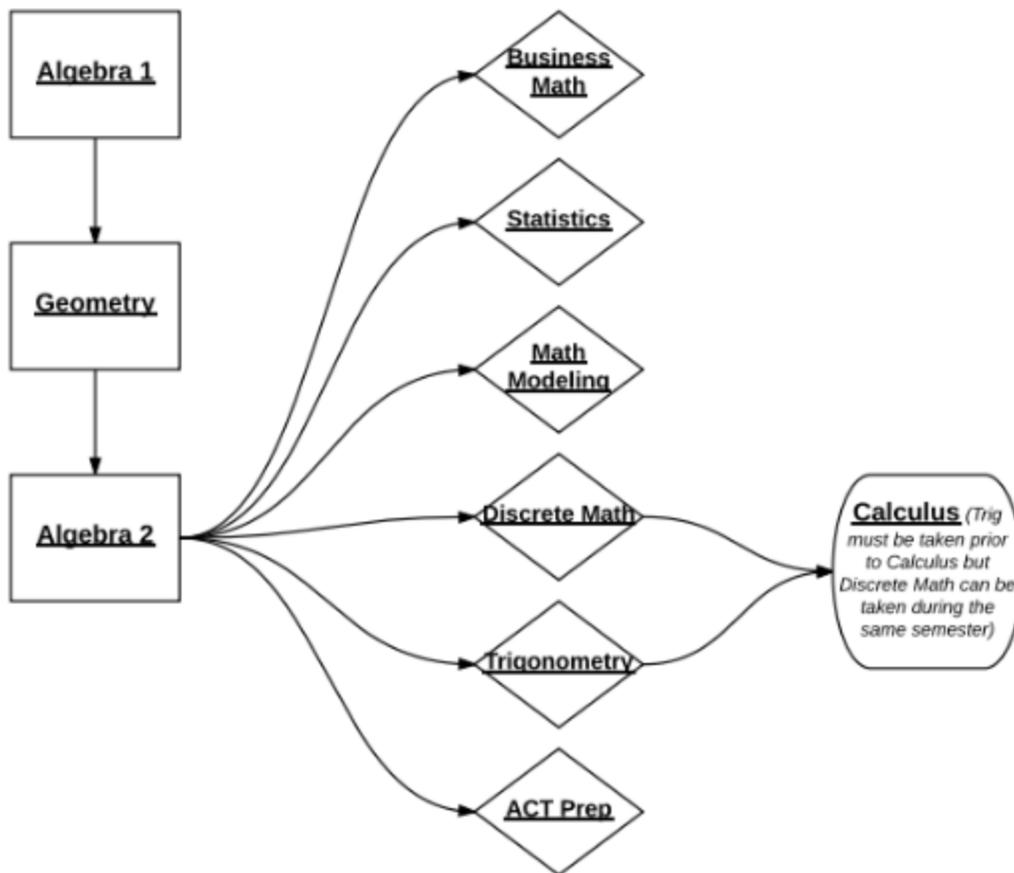
(1 semester = 1 credit)

GRADE 9 ELECTIVE

*PREREQUISITE: none**MAXIMUM ENROLLMENT: 12 per section*

This course will be taken concurrently with Algebra. It is designed to support students in Algebra by focusing on conceptual understanding, gap filling, and fluency practice. Placement into this course will be determined by the teacher.

MATH COURSE FLOWCHART



MENTORING

3857 **MUSTANG MENTOR**

(1 year = 2 credits)

GRADES 11-12 ELECTIVE

PREREQUISITE: no office referrals, no violation of good conduct policy, good attendance (minimal absences & tardies), teacher/staff recommendation

MAXIMUM ENROLLMENT: determined each semester

This course will involve one-to-one or small group mentoring/tutoring within an elementary or 5/6th grade classroom. The high school Mustang Mentor will work with a student or students with guidance from the classroom teacher or supervisor. The focus of this class will be on assisting younger students with academic assistance behavior/emotional control and overall support. The goals of the course are to help younger students improve grades, improve learning attitudes, demonstrate better responsibility, develop self-motivation, work well with peers and staff, increase self-esteem and prepare for the next grade level.

Skills needed to be successful in this class: patience, persistence, dependability, consistency, ability to communicate well, ability to role model positive learning skills and techniques. Specific expected outcomes: enhance ability to work with and relate to younger students, strengthen ability to communicate with others, learn techniques to assist and motivate younger students. Career Pathways: education, social services, human services, juvenile justice, counseling, psychology, sociology.

MULTI-OCCUPATIONAL CAREERS

3512 **EXPLORING TEACHING OPPORTUNITIES 1** (1 year = 2 credits)

GRADES 11-12 ELECTIVE

PREREQUISITE: none

MAXIMUM ENROLLMENT: none

The purpose of the course is to provide students with an opportunity to explore the teaching profession through online class discussions and assignments as well as field experience in a variety of preK-12 grade classrooms. The components of the class will include the following: the role of schools and educators in communities and society at large, the process of developing an understanding of how students learn and combining that with strategies for meeting educational goals, the important role of communication, collaboration, and decision making within the teaching profession, & the use of technology in education.

3513 **EXPLORING TEACHING OPPORTUNITIES 2** (1 year = 2 credits)

GRADE 12 ELECTIVE

PREREQUISITE: Exploring Teaching Opportunities 1

MAXIMUM ENROLLMENT: none

The purpose of this course is to provide students with the opportunity to continue to explore the teaching profession through ongoing field experience with a cooperating teacher in the preK-12 Shenandoah school district. During this field experience the student will work one-on-one with a student or a small group. The student will develop activities/lessons or use one the cooperating teacher uses in the classroom. A reflective journal will be required to be kept on a daily/weekly basis about the time spent in the classroom, the things learned, and the applications for the future as a teacher.

3736 **AUTO MECHANICS TECHNOLOGY 1** (1 year = 2 credits)

GRADES 10-12 ELECTIVE

PREREQUISITE: none

MAXIMUM ENROLLMENT: 10 per section

Automotive Mechanics/Technology 1 is a course of fundamentals that covered passenger car construction, principles of operation, and basic service procedures. This is the foundation on which a sound, thorough knowledge of auto mechanics is based. Once these fundamentals are learned, know how through experience will enable the student to diagnose trouble and perform needed repairs.

3738 **AUTO MECHANICS TECHNOLOGY 2** (1 year = 2 credits)

GRADES 11-12 ELECTIVE

PREREQUISITE: Auto Mechanics 1

MAXIMUM ENROLLMENT: 10 per section

Automotive Mechanics/Technology 2 is a course that advances the knowledge gained in Automotive Mechanics/Technology 1 which covered passenger car construction, principles of operation and basic service procedures. Students will gain further know how through experience which will enable the student to diagnose trouble and perform needed repairs.

PHYSICAL EDUCATION / HEALTH

13616 **HEALTH**

(1 year = 2 credits)

GRADES 9-12 ELECTIVE

PREREQUISITE: none

MAXIMUM ENROLLMENT: 15 per section

Students in this course have an opportunity to develop skills related to their total wellness. Students will work on all levels of wellness: social, mental, and physical.

3618 PHYSICAL EDUCATION

(1 semester = 1 credit)

GRADES 9-12 REQUIRED

*PREREQUISITE: none**MAXIMUM ENROLLMENT: 25 per section*

Physical Education focuses on student participation in a wide variety of team and individual activities throughout the course. The students will meet daily and participate in units lasting from two to three weeks long. Each unit will start with a unit overview including the history, origin, and rules/etiquette of the activity. A written unit exam will be given at the end of specific units to assess the student's knowledge of the unit. In addition, there will be skills test given to assess the student's improvement throughout specific units. Physical fitness is the last area that the students will be assessed on. A physical fitness pre-test will be administered at the beginning of the course and a post-test to conclude the class. The tests will assess cardiovascular endurance, muscular strength and flexibility. They will be used to track student improvement.

The students will also be introduced to the weight program Bigger Faster Stronger. The students will split time between physical education units and the weight room. A student in physical education will get the opportunity to lift weights approximately half the time they are in class.

3617 WEIGHTS

(1 semester = 1 credit)

GRADES 9-12 ELECTIVE

*PREREQUISITE: active in at least one sport**MAXIMUM ENROLLMENT: 20 per section*

Weight Training focuses on definitions and common terms used in the weight room, identifies major muscle groups, includes easy-to-follow instructions and safe lifting procedures and provides the program Bigger Faster Stronger to get students started. Clear explanations of weight training philosophies such as FITT (frequency, intensity, time, and type), gradual progressive overload, individuality and specificity, and adaptation are provided.

Students will participate in a weight program that meets daily. The program will be broken down into four week cycles that are found on the BFS record card. At the conclusion of each quarter students will test out in our four core lifts; bench, squat, clean, and dead lift. Also, a physical fitness pre-test will be administered at the beginning of the course and a post-test to conclude the class. The tests will assess cardiovascular endurance, muscular strength and flexibility. They will be used to track student improvement.

SCIENCE

3200 9TH GRADE SCIENCE

(1 year = 2 credits)

GRADES 9-12 REQUIRED

*PREREQUISITE: none**MAXIMUM ENROLLMENT: 24 per section*

Ninth Grade Science is the integrated study of Earth Science and Physics. Students will learn among other topics: the study of geologic time and the earth's history, the earth's systems, plate tectonics and Earth's internal structure, rocks and the rock cycle, minerals, soil, earthquakes, weathering, erosion and deposition, the atmosphere and climate, studying space, characteristics of our solar system, understanding the universe, forces and interactions, and metric conversions.

3201 BIOLOGY

(1 year = 2 credits)

GRADES 9-12 REQUIRED

*PREREQUISITE: none**MAXIMUM ENROLLMENT: 24 per section*

Biology is a two-term course offered to mainly sophomore students. Biology focuses on the study of life by examining the next generation science standards concepts: cellular biology, genetics, ecology, and evolution. The scientific process and laboratory skills are emphasized along with biology's connections to other scientific disciplines.

3202 **CHEMISTRY** (1 year = 2 credits) GRADES 10-12 ELECTIVE

PREREQUISITE: Physical Science & previous or concurrent enrollment in Algebra 1

MAXIMUM ENROLLMENT: 24 per section

Chemistry is the study of the properties and structure of matter. Students will understand the structure of atoms, the usefulness of the periodic table, chemical bonding, chemical reactions, the mole, stoichiometry, and the gas laws. Using the history of science, science textbooks, lab investigations, and research, students will become scientifically literate in chemistry. Not only will students listen to lectures, but they will participate in brainstorming, cooperative learning, guided practice, inquiry, and note-taking. Students will also use some memorization, graphic organizers, research, and technology to aid their learning.

3205 **PHYSICS** (1 year = 2 credits) GRADES 11-12 ELECTIVE

PREREQUISITE: Physical Science & previous or concurrent enrollment in Algebra 2

MAXIMUM ENROLLMENT: 24 per section

Physics involves the study of the forces of nature affecting matter: equilibrium, motion, momentum, and the relationship between matter and energy. Using the history of science, science textbooks, lab investigation, and research, students will become scientifically literate in physics. Not only will students listen to lectures, but they will participate in brainstorming, cooperative learning, guided practice, inquiry, and note-taking. Students will also use some memorization, graphic organizers, research, and technology to aid their learning.

3208 **ANATOMY & PHYSIOLOGY** (1 year = 2 credits) GRADES 10-12 ELECTIVE

PREREQUISITE: successful completion of Biology or concurrent Biology w/permission of teacher

MAXIMUM ENROLLMENT: 18 per section

Essential principles of human anatomy and physiology are presented, including basic chemistry, cell and tissue studies, and an overview of all the body systems. First semester of a two-semester sequence deals with the structure and function of the human body and mechanisms for maintaining homeostasis within it. The class includes the study of cells, tissues, and the integumentary system. Second semester is a continuation of the study of the structure and function of the human body and the mechanisms for maintaining homeostasis within it. The skeletal, muscular, nervous, cardiovascular, and urinary systems are included. Laboratory dissection will be used to relate structures to those of humans.

3211 **AP CHEMISTRY** (1 year = 2 credits) GRADES 11-12 ELECTIVE

PREREQUISITE: Chemistry

MAXIMUM ENROLLMENT: 24 per section

Chemistry is the study of the properties and structure of matter. The AP Chemistry course covers the same content covered in two semesters of general chemistry at a college level. Successful completion of high school chemistry is a prerequisite for AP Chemistry. In AP Chemistry, students will expand their knowledge on, among other topics, the structure of atoms, chemical bonding, chemical reactions, stoichiometry, gas laws, solution chemistry, thermochemistry, nuclear chemistry, reaction kinetics, electrochemistry, equilibrium, acids and bases, and more. The course is also designed to replicate the same experience as that of college chemistry laboratory course. Students will spend time doing in-depth experiments and write college level quality lab reports. Using the history of scientific theory, science textbooks, lab investigations, and research, students will become even more scientifically literate in chemistry. Not only will students listen to lectures, but they will participate in brainstorming, cooperative learning, guided practice, inquiry, and note-taking. Students will also use some memorization, graphic organizers, research, and technology to aid their learning. The course is designed to improve the study skills that are necessary to be successful in rigorous college level courses.

SENIOR REQUIREMENT

3508 SENIOR PORTFOLIO

(1 semester = 1 credit)

GRADE 12 REQUIRED

PREREQUISITE: none

MAXIMUM ENROLLMENT: 24 per section

This required course for all seniors allows students the opportunity to build their personal portfolio and learn a wide variety of job searching, job getting, and job keeping skills. Students are exposed to a variety of information on career and training options in pursuit of career decision making. Attention to life skills is also emphasized. Skills include CPR training, renting an apartment, buying a car, obtaining insurance, and understanding the use of financial services.

SOCIAL SCIENCES

3400 SOCIAL SCIENCE

(1 year = 2 credits)

GRADES 9 REQUIRED

PREREQUISITE: None

MAXIMUM ENROLLMENT: 25 per section

Social Science is designed as an introductory social studies class to develop a stronger academic foundation for future classes. Included in the units are lessons called Skill Builder in Social Studies to provide students with the tools needed to study, interpret, and apply the information presented to them in any social studies class. Specific areas or units of instruction include: introduction to economics, the future, world and national geography, political science, psychology, sociology, current events, and national and world history items.

3401 WORLD HISTORY

(1 year = 2 credits)

GRADES 10-12 ELECTIVE

PREREQUISITE: Social Science

MAXIMUM ENROLLMENT: 25 per section

World History will employ a chronological approach to the history of western civilizations surveying humankind's social, economic, political, military, and cultural development from early civilization to the contemporary period. By Structure, students will develop a sense of the continuity of world history and an understanding of cause-and-effect relationships. The course is based on: role playing activities, puzzles, map exercises, creative writings, group activities, discussion, lectures, drawings, and films. The goal is for the student to gain an appreciation for some of the world's greatest people, places, and events.

3402 U.S. HISTORY

(1 year = 2 credits)

GRADES 11-12 REQUIRED

PREREQUISITE: Social Science

MAXIMUM ENROLLMENT: 25 per section

This course will emphasize the history of the U.S. in the 20th century. Units that will be covered include the Progressive era, World War I and World War II, the Great Depression/New Deal, the Cold War, the 1960's and the Modern Times.

3403 AMERICAN GOVERNMENT & ECONOMICS (1 year = 2 credits)

GRADE 12 REQUIRED

PREREQUISITE: Social Science

MAXIMUM ENROLLMENT: 25 per section

In the next year, students will study the history, concepts, principles, and theories of government by examining the United States as well as the history, concepts, principles, and theories of economics domestically and internationally. We will examine the meaning of government at the local, state, and national level and how government is connected to all aspects of society. Students should expect to study a variety of topics and analyze how individuals and government affect those issues so they can understand the goal of citizenship and become aware of his/her rights and responsibilities as a member of society. We will examine topics in macro- and microeconomics, such as types of economies, supply and demand, GDP/GNP, the role of government in economics, and market structures. Students should expect to keep current on news events regarding economics. Current events will be essential in guiding our study of government. This class will involve small and large group discussion, individual and group projects, and lectures with note-taking.

3404 **AP AMERICAN GOVERNMENT** (1 year = 2 credits) GRADE 12 ELECTIVE

PREREQUISITE: Social Science

MAXIMUM ENROLLMENT: 25 per section

This course is modeled after the goals, topics, and outlines provided by the College Board Advanced Placement Program. Using their guidelines, the instructor will set the curriculum for this class as the equivalent of a rigorous political science college class. This course will focus on issues in government and politics in the United States. The course outline contains a detailed list of topics in sequential order. Students should expect to achieve mastery on meet the standards and benchmarks. Students should enhance reading and writing skills. Students will learn the demanding pace of college classes, how to thoroughly examine materials and topics, and the amount of out-of-class time it takes to complete a college-level course. No matter the score achieved on the AP Exam, students should take away skills and knowledge that will prepare them to be successful college students after graduation. This course addresses the same standards as American Government, but in a more in-depth and rigorous study. Students are required to take the AP Government Exam in May.

3405 **SOCIOLOGY** (1 semester = 1 credit) GRADES 11-12 ELECTIVE

PREREQUISITE: Social Science

MAXIMUM ENROLLMENT: 25 per section

In the next semester, students will study the concepts, principles, theories, and methods of sociology. We will examine how our environment impacts individual and group behavior, how social institutions have been created and maintained, and look at topics, such as race, gender, deviance, and class stratification. The ability to understand how environment affects individual behavior, group behavior and shapes people's lives will also be covered in this course. This class will involve small and large group discussion, individual and group projects, and lectures with note-taking. This should provide students with skills that are applicable outside the classroom.

3406 **PSYCHOLOGY** (1 semester = 1 credit) GRADES 11-12 ELECTIVE

PREREQUISITE: Social Science

MAXIMUM ENROLLMENT: 25 per section

In one semester, students will study the concepts, principles, theories, and methods of psychology. Students will examine the history of psychology, mental patterns, and social issues that affect our society at large. Students will discover the ability to understand how environment affects individual behavior and the ability to understand how mental abilities affect human behavior. This class will involve small and large group discussion, individual and group projects, and lectures with note-taking. This should provide students with skills that are applicable outside the classroom.

3408 **CONTEMPORARY AFFAIRS** (1 semester = 1 credit) GRADES 10-12 ELECTIVE

Prerequisite: Social Science

Maximum Enrollment: 25 per section

This course is designed to accommodate students with a wide variety of information in various areas of social studies and current events. Each student will be provided with a text of current national and international issues. The course will incorporate sociology, geography, government, and history. The two major projects for this class are the zoo project and the prison project. This will include a field trip to the Henry Doorly Zoo and the Omaha Correctional Center.

SPECIAL EDUCATION

3501 **INDIVIDUAL WORK STUDY** (1 credit/semester for each period) GRADES 9-12 ELECTIVE

PREREQUISITE: written in IEP

MAXIMUM ENROLLMENT: none

This class is designed to give students exposure to various career opportunities according to their interests. Jobs are found by the special programs director for each student and the student receives credit upon completion of all requirements set by the employer and instructor.

3505 **GUIDED STUDY**

(1 credit/semester for each period)

GRADES 9-12 ELECTIVE

PREREQUISITE: written in IEP

MAXIMUM ENROLLMENT: none

Offered each term to students as indicated on their Individual Education Plan (IEP). Multiple sections of this class may be taken. The primary goal of the class is to assist students in developing skills that will enable them to meet the demands of the regular curriculum and help them to generalize situations and settings outside the school. Study skills, goal-setting, peer interaction, problem-solving and developing self-esteem are areas that will be covered. Assistance will also be available for classroom assignments. Specially designed instruction will be provided as outlined in the student's IEP.

3506 **LIFE SKILLS**

(1 credit/semester for each period)

GRADES 9-12 ELECTIVE

PREREQUISITE: written in IEP

MAXIMUM ENROLLMENT: none

This class develops the daily life skills that a student will need to be able to live and work independently. The focus will be on daily life skills that are in the areas of cooking, cleaning, laundry, vocational work skills, personal information, money, time, social interaction, personal care, and communication skills. This list is not inclusive and could be added to or taken away from depending on the individual's own needs as described in his/her IEP.

WORK OPPORTUNITIES

3501 **WORK STUDY**

(up to 9 credits)

GRADES 11-12 ELECTIVE

PREREQUISITE: part-time job & Principal approval

MAXIMUM ENROLLMENT: none

Students have the opportunity to receive credit for working an outside of school job. Students will receive one credit for every 120 hours worked. Students must provide proof of hours worked and submit required paperwork each quarter in order to receive credit.