



**Delaware Valley High School  2019-2020**

---

# COURSE CATALOG

# Equal Rights and Opportunities Policy

## CONTINUOUS NOTICE of NONDISCRIMINATION

The Delaware Valley School District does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs or activities and provides equal access to the Boy Scouts and other designated youth groups. Inquiries may be directed to the Title IX Coordinator or the Section 504/ADA Title II Coordinator at 252 Route 6 & 209 Milford, PA 18337 or 570-296-1800.

# Table of Contents

<u>GRADUATION REQUIREMENTS .....</u>	<u>1</u>
<u>ACADEMIC STANDARDS.....</u>	<u>3</u>
<u>THE COURSE SELECTION PROCESS.....</u>	<u>5</u>
<u>DUAL ENROLLMENT and AP COURSES .....</u>	<u>6</u>
<u>COURSE DESCRIPTIONS.....</u>	<u>7</u>
<u>Art .....</u>	<u>7</u>
<u>Business .....</u>	<u>11</u>
<u>Career and Technical Education.....</u>	<u>14</u>
<u>Engineering.....</u>	<u>22</u>
<u>English .....</u>	<u>24</u>
<u>English Language Development (ELD).....</u>	<u>31</u>
<u>Family and Consumer Science .....</u>	<u>32</u>
<u>Freshman Seminar.....</u>	<u>33</u>
<u>Mathematics.....</u>	<u>34</u>
<u>Multidisciplinary.....</u>	<u>38</u>
<u>Music.....</u>	<u>39</u>
<u>Physical Education and Health.....</u>	<u>41</u>
<u>Reading.....</u>	<u>43</u>
<u>Science .....</u>	<u>44</u>
<u>Social Studies .....</u>	<u>49</u>
<u>Technology Education.....</u>	<u>58</u>
<u>World Languages .....</u>	<u>60</u>

# Delaware Valley School District and Pennsylvania Department of Education Graduation Requirements

1 Credit equals one full year course or a combination of two half year courses

**4** Credits of English passed

**3** Credits of Science passed

**3** Credits of Mathematics passed

**4** Credits of Social Studies passed

\*Technical Education students that complete the program may graduate with 3 credits in Social Studies.

**2** Credits of Humanities Passed

\*1 of which may be a Social Studies credit

**2** Credits (4 Years) of Physical Education passed which includes Health and Driver Education.

\*Career + Technical education students that complete the program may graduate with 1.5 physical education credits.

**4** Credits of Electives (.5 includes Freshman Seminar and Health 9.)

## **A minimum of 21 credits are required for graduation.**

Students who will be graduating in 2019 must pass the Algebra 1, Biology, and Literature Keystone Exams with a score of proficient or advanced.

***\* Humanities requirement satisfied via passing music, art, family & consumer sciences, or world languages***

In addition to the completion of 21 credits, all students must demonstrate achievement of the Academic standards in the following areas:

1. Arts and Humanities
2. Career Education and Work
3. Civics and Government
4. Economics
5. Environment and Ecology
6. Family and Consumer Science
7. Geography
8. Health, Safety and Physical Education
9. History
10. Mathematics
11. Reading, Writing, Speaking and Listening
12. Science and Technology

If a student is deficient in the achievement of Academic standards, an alternative method for achievement of the standards will be provided for the student. The options may include:

1. Summer School
2. Independent Study
3. Field Experience
4. Individualized Tutor
5. Mentorship
6. Higher Education Courses
7. Adult and Community Education Courses

All students must complete a research project prior to graduation. Research projects must be developed according to the standards defined by the English department.

Prior to graduation, all students will complete a project that incorporates technology tools.

All students with an individualized education plan (IEP) will complete graduation requirements as listed in their IEP.

# Academic Standards

*Pennsylvania's public schools shall teach, challenge, and support every student to realize his or her maximum potential and to acquire the following knowledge and skills:*

## **Arts and Humanities**

Production, Performance and Exhibition of Dance,  
Music, Theatre and Visual Arts  
Historical and Cultural Contexts

Critical Response  
Aesthetic Response

## **Career Education and Work**

Career Awareness and Preparation  
Career Acquisition (Getting a Job)

Career Retention and Advancement  
Entrepreneurship

## **Civics and Government**

Principles and Documents of Government  
Rights and Responsibilities of Citizenship

How Government Works  
How International Relationships Function

## **Economics**

Economic Systems  
Markets and the Functions of Government  
Scarcity and Choice

Economic Interdependence  
Work and Earnings

## **Environment and Ecology**

Watersheds and Wetlands  
Renewable and Nonrenewable Resources  
Environmental Health  
Agriculture and Society  
Integrated Pest Management

Ecosystems and their Interactions  
Threatened, Endangered and Extinct Species  
Humans and the Environment  
Environmental Laws and Regulations

## **Family and Consumer Science**

Financial and Resource Management  
Balancing Family, Work, and Community Responsibility

Food Science and Nutrition  
Early Childhood Development

## **Geography**

Basic Geographic Literacy  
The Physical Characteristics of Places and Regions  
The Human Characteristics of Places and Regions

The Interactions Between People and  
Places

## **Health, Safety and Physical Education**

Concepts of Health  
Healthful Living  
Safety and Injury Prevention

Physical Activity  
Concepts, Principles and Strategies of Movement

## **History**

Historical Analysis and Skills Development  
Pennsylvania History

United States History  
World History

**Mathematics**

Numbers, Number Systems and Number Relationships  
Computation and Estimation  
Measurement and Estimation  
Mathematical Reasoning and Connections  
Mathematical Problem Solving and Communication

Statistics and Data Analysis  
Probability and Predictions  
Algebra and Functions  
Geometry  
Trigonometry  
Concepts of Calculus

**Reading, Writing, Speaking and Listening**

Learning to Read Independently  
Reading Critically in all Content Areas  
Reading, Analyzing and Interpreting Literature  
Types of Writing  
Research

Quality of Writing  
Speaking and Listening  
Characteristics and Function of English  
Language

**Science and Technology**

Unifying Themes  
Inquiry and Design  
Biological Sciences  
Physical Science, Chemistry, and Physics

Earth Sciences  
Technology Education  
Technological Devices  
Science, Technology and Human  
Endeavors  
Engineering

## THE COURSE SELECTION PROCESS AT DVHS

There are many factors that have a significant bearing on the academic performance of students within classes here at DVHS. In the following subjects, students will be recommended by their current classroom teacher: English, Mathematics, Social Studies, Science, and World Language. All students have the opportunity to select any course they feel is of interest and meets their career goals. The student's guidance counselor and the high school administration reserve the right to change a student's schedule based on the student's past academic performance and standardized testing results in order to accommodate the needs of the student body and resources available through the school.

- Parents/guardians and students are encouraged to discuss course selections prior to the students' scheduling courses with their counselors.
- Counselors will meet with each student on an individual basis to review course selections, course load, graduation requirements, and students' career educational goals
- After the student meets with his/her school counselor, the schedule will be sent home for parental approval.
- The student's schedule must be returned to the student's respective guidance office once the parent/guardian signs the schedule as an approval.
- Scheduling conflicts may exclude student placement in electives. Counselors will ask students to identify an alternate elective which will be substituted for a conflicting course.
- Requests for changes in course selection must be made during the "drop/add" time frame during the first three days of school and classes will be based upon course availability.

### **Schedule Change Procedures:**

1. If a student feels they may be misplaced in a class, they must follow the process below in order to ensure correct academic placement:
  - a. Speak to the teacher to discuss how the grade can be improved
    - i. Ask for tutoring opportunities and other tips for grade improvement
    - ii. Complete a pre-determined number of tutoring sessions regularly to establish if improvements are being made as a result of the intervention
  - b. Contact the guidance counselor
    - i. Guidance counselor will contact last year's teacher to discuss previous academic performance and review the recommendation
  - c. If the team determines the student does not have the necessary skill set to be successful after the steps above were completed, then the guidance counselor will contact an administrator to discuss a change in the class.
  - d. If a class change is decided upon and the student was placed in the class as a result of a parent/guardian override, his/her transcript will reflect this change as a "withdrawal failing" from the original course.



### **Dual Enrollment:**

Dual enrollment, referred to as “concurrent enrollment”, is an effort to encourage a broader range of students to experience postsecondary coursework while still in the supportive environment of their local high school. Its purpose includes increasing the number of students that go on to postsecondary education and decreasing the need for remedial coursework at postsecondary institutions. Dual enrollment can be administered in more than one way. In some cases, it is a locally administered program that allows a secondary student to concurrently enroll in postsecondary courses and to receive both secondary and postsecondary credit for that coursework. In other cases, students attend class on a college campus with college students.

Our Dual Enrollment program allows high school juniors and seniors to take college courses while still enrolled in a traditional high school program. Students are welcome to apply, however, we ask that the students notify their school counselor if they apply to another college. Courses taken are usually freshman level courses which may be transferable to other colleges, allowing students a significant head-start in their freshman year. For up to date information and applications, please visit the following address:

<https://pa01001022.schoolwires.net/Page/5209>

Delaware Valley offers college credit through the following institutions:

Keystone College  
Lackawanna College  
Luzerne County Community College  
Johnson College  
Rochester Institute of Technology

### **Advanced Placement (AP) Courses:**

The College Board’s Advanced Placement Program enables students to pursue college-level studies while still in high school. Through more than 30 courses, each culminating in a rigorous exam, AP provides willing and academically prepared students with the opportunity to earn college credit, advanced placement, or both. Taking AP courses also demonstrates to college admission officers that students have sought out the most rigorous courses work available to them.

Each AP course is modeled upon a comparable college course, and college and university faculty play a vital role in ensuring that AP courses align with college-level standards. Talented and dedicated AP teachers help AP students in classrooms around the world develop and apply the content knowledge and skills they will need later in college. Performing well on an AP Exam means more than just the successful completion of a course; it is a gateway to success in college. Research consistently shows that students who receive a score of 3 or higher on AP Exams typically experience greater academic success in college and have higher graduation rates than their non-AP peers.

All AP students will register for their respective exams in the beginning of October. This registration process is a commitment to taking the exam in the spring. Each exam costs approximately \$85 or \$53 if the student is eligible for a reduced rate. If by the end of the 3<sup>rd</sup> quarter the student has a B+ (cumulative) grade in the course, Delaware Valley will pay for the exam. If not, the student is expected to pay for the exam at this time but will receive reimbursement in the fall if he or she has achieved a passing score (3 or higher). If an exam is ordered for a student and then has to be cancelled for any reason, there will be a \$40 cancellation fee.

Please see the link below to search for what scores are needed on an AP exam in order to receive college credit from specific universities around the country.

<https://apstudent.collegeboard.org/creditandplacement/search-credit-policies>

# Course Descriptions

## ART

### **GENERAL ART – 1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12**

This course is for the student who enjoys hands-on art making activities and who wishes to explore their creative aptitude. Students learn the primary skills of many visual art processes as well as design and creative strategies. Projects will involve creating 2 and 3-dimensional projects using media that may include printmaking, mixed media, collage, fiber arts, paper cutting and folding, mosaics, papier-mâché, and re-purposing.

### **FOUNDATIONS IN ART – 1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12**

This course will give instruction on how to use basic 2-D media such as colored pencil, watercolor, and pen and ink, to create original works of art based on an art historical timeline. Students will learn how to analyze and discuss the visual and formal qualities of art. A sketchbook journal requiring drawing, writing and idea development will be an integral part of the course.

### **COMPUTER ART 1 – 1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12**

The purpose of this course is to learn how to create art and original graphics using computer software and technological equipment. Time spent in this course will be divided among learning Adobe Illustrator, Adobe Photoshop, and concepts of digital photography. Projects are designed to integrate the use of scanners, digital drawing tablets, cameras and iPads while learning the elements and principles of design. Prior drawing experience is helpful.

### **COMPUTER ART 2 – 1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12**

This art course is an advanced application of the skills covered in Computer Art 1. Students will learn advanced digital art making methods in Adobe Illustrator and Photoshop, but will also be challenged to integrate these skills with traditional art media such as drawing, and collage. If time and interest exist, principles of computer animation in Adobe Animate will also be introduced.

### **DIGITAL PHOTOGRAPHY – 1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12**

Students who have mastered the skills taught in Computer Art 1 have been most successful in this course. It is expected the photography be created both in and out of class for the greater possibility of both creative and original works. Therefore, it is preferred that the student has his/her own digital SLR camera. Study of the art of photography will be approached through the following topics: Technical camera operation, composition and design, lighting, photo criticism, visual culture, workflow, photo management, image editing, history of photography.

### **GRAPHIC DESIGN 1 – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

Students who have mastered the skills taught in Computer Art 1 have been most successful in this course. While utilizing the design process, students will learn the power of both word and image in communicating ideas and information. Students will be introduced to the fields of advertising, graphic design, and typography while using the Adobe Illustrator program.

### **GRAPHIC DESIGN 2 – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

Students who have mastered the skills taught in Computer Art 1 have been most successful in this course. Students will continue to utilize the design process. Projects will simulate real world design problems such as page layout, magazine ads, book jacket designs and posters incorporating photographic imagery and photo manipulation. Students will exercise their ability to observe, think creatively, and generate good ideas. Students will learn high quality design by honoring their ability to observe, think creatively, and generate good ideas.

### **INTRODUCTION TO DRAWING 1 – 1 SEMESTER; ½ CREDIT; GRADES 9, 10, 11, 12**

This course is a one semester elective offered to students who have a desire to learn the fundamental skills of drawing from reality; the course is highly recommended for the student who plans to take AP Studio Art, other art electives and those who plan to pursue any visual art pathway. Measuring with a ruler, estimating size and visualizing proportional relationships are necessary skills that will be built upon in this sequential, traditional course of study. Weekly sketchbook assignments are an important part of the course and independent practice and application of learned skills are recommended for success.

### **INTRODUCTION TO DRAWING 2 – 1 SEMESTER; ½ CREDIT; GRADES 9, 10, 11, 12**

This studio course is a one semester elective offered to students in grades 10-12 who have successfully completed Drawing 1; it is highly recommended for the student who plans to take AP Studio Art. The course builds upon the basic skills acquired in Drawing 1. A variety of wet and dry drawing media are used to render complex subject matter. The Elements and Principles of Design are studied and applied to the creative process of planning and executing various drawing challenges; personal interpretation and design exploration are strongly encouraged. Students must maintain a drawing journal with twice-weekly entries of sketches, reflection and experimentation.

### **PAINTING MEDIA 1 – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

This course is appropriate for those students who have successfully completed Intro to Drawing 1. This course provides the foundation of painting, its application and materials. It focuses on the color theory and the processes of wet-into-wet, dry-brush paint application, masking, and alla prima. Working from direct observation, students develop and understanding of composition and paint manipulation. A sketchbook is required on a weekly basis. Solid drawing skills are recommended for success in this course.

### **PAINTING MEDIA 2 – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

This course is a continuation of Painting Media 1. It provides a deeper exploration into two-dimensional techniques and emphasis on the development of a student's individual point of view. Using traditional and non-traditional materials, students develop inventive experimental approaches to a variety of pictorial media and examine how media, idea and composition relate. Students explore the boundaries between painting and sculpture when non-traditional materials are incorporated in collage. A sketchbook is required on a weekly basis.

### **CERAMICS 1 – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

This elective will teach the fundamental methods of forming clay into a 3-dimensional art form. The basic techniques for hand building (pinch pot, slab construction, and coil construction) will be demonstrated. Emphasis will be placed on craftsmanship, creativity, and application of the elements and principles of design. Definitions of materials and ceramic processes will be presented and a sketchbook will be maintained for research and planning. It is highly recommended that students take another high school art elective such as General Art, Intro to Drawing, or Foundations before enrolling in Ceramics.

### **CERAMICS 2 – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

This course follows and builds upon the skills learned in Ceramics 1. Focus will be on the construction of more complex pieces through creativity and problem solving. This class will introduce the additional challenge of the fundamentals of wheel throwing. A sketchbook will be maintained for research and planning.

### **3-D DESIGN – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

In this studio course, the elements and principles of 3-D design are studied and to create art that exists in three dimensions. Various artists, art styles and genres will be explored. The sculptural processes of assemblage, reduction carving and modeling will be used to create artwork based on a theme or concept. The ability to generate original solutions to design problems will require basic drawing skills, creative thinking and artistic exploration of possible approaches. Weekly Sketchbook assignments that require drawing, reflection and research are part of the curriculum. It is highly recommended that students take Intro to Drawing and Ceramics 1 before taking this course.

### **JEWELRY DESIGN – 1 SEMESTER, ½ CREDIT, GRADES 11, 12**

Taking Introduction to Drawing 1 prior to this course is recommended. This course will enable students to gain skills of craftsmanship, design and technology. They will be exposed to a broad range of metalworking processes and techniques and develop fabrication and finishing skills in a 3-D form. They learn within a new format, to articulate their creative ideas and synthesize the concepts and processes historically and contextually

### **AP ART HISTORY – FULL YEAR, 1 CREDIT, GRADES 11, 12**

The AP Art History course explores such topics as the nature of art, its uses, its meanings, art making, and responses to art. Through investigation of diverse artistic traditions of cultures from prehistory to the present, the course fosters in-depth and holistic understanding of the history of art from a global perspective. Students learn to apply skills of visual, contextual, and comparative analysis to engage with a variety of art forms, constructing understanding of individual works and interconnections of art-making processes and products throughout history. The course and exam are structured around ten content areas: Global Prehistory, Ancient Mediterranean, Early Europe and Colonial Americas, Later Europe and Americas, Indigenous Americas, Africa, West and Central Asia, South, East, and Southwest Asia, The Pacific, and Global Contemporary.

**AP STUDIO ART – FULL YEAR, 1 CREDIT, GRADES 11, 12**

This is a rigorous college level studio course offered to highly motivated juniors and seniors who have taken Drawing 1 and at least two other courses such as Painting, 1 or 2, Drawing 2, Photography, Graphic Design, OR, Ceramics 1 or 2, Jewelry Design, and 3-D Design. Coursework is designed to build mastery in technique, composition/design, research, experimentation, and creative problem solving. Critical thinking, objective analysis of artwork, and the ability to communicate in the language of art will be developed and used throughout the course. Developing meaningful peer relationships and self-motivation is necessary. Students must be willing to devote several hours per week of outside time to art production, research, and self-improvement. Maintaining an active art journal/sketchbook is a critical course requirement. The “exam portfolio” requires at least 24 high quality artworks to be completed and submitted to the College Board in May; students will declare their choice of portfolio early in the year: 2-D, Drawing or 3-D, and work in and out of the classroom toward fulfilling the requirements. Summer work is assigned and must be completed in order to be successful in this course.

# BUSINESS

## **ACCOUNTING APBP – FULL YEAR, 1 CREDIT, GRADES 11, 12**

In this course, students learn how businesses plan for and evaluate their operating, financing and investing decisions and then how accounting systems gather and provide data to internal and external decisions makers. Students who take this course must have strong analytical, logic, reading, and critical thinking skills. This weighted course covers all the learning objectives of a collegiate financial and managerial accounting class. The course is part of the Accounting Pilot & Bridge Project and uses an integrated approach. All student completing this course are expected to take the final qualifying examination. Students may be able to earn college credits with an appropriate score on the qualifying examination.

## **BUSINESS COMMUNICATIONS – 1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12**

This course is designed for any student interested in having a great job interview, communicating with clients, being a class officer, learning parliamentary procedure, or just improving public speaking skills. Students will learn to utilize oral and written expression designed to inform, persuade, demonstrate, and interpret. Students will draft and rehearse speeches, give presentations, employ audio-visual aids, and respond to audience feedback. Students will also learn professionalism, writing techniques, workplace digital savvy skills and resume-building skills.

## **BUSINESS LAW – 1 SEMESTER, ½ CREDIT, GRADES 11, 12**

This course familiarizes students with the nature and workings of the United States law as it affects day to day situations for business and personal use. Topics will include, but are not limited to, sales contracts, crimes, torts, fraud, credit obligations, property rights and transactions, and wills/estates. Students will be able to apply textbook theory to real-world cases. Students will use a textbook, companion website, and various supplemental activities to complete the course.

## **CAREER EXPLORATION – 1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12**

This is a hands-on project based course that is designed for students to be exposed to their future career options beyond high school. Students will complete a progression of skill and interest surveys that will enable them to develop a realistic plan for the future. Students will be exposed to all options including, but not limited to college, the workforce, and military. Students will conduct career research, college research and cost analysis, as well as workforce preparation. Students will learn about workplace safety and labor laws, participate in mock job interviews, and learn about working in a professional setting. Students will create several documents throughout the course that demonstrate personal growth, skill summaries, and development plans that can be used beyond the classroom setting. Students taking the course will leave with a sense of direction and the resources needed to make informed decisions about their future and be contributive to the workforce.

## **COMPUTER APPLICATIONS – 1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12**

Using Microsoft Office and Google Applications, students will learn how to effectively create and maintain various types of documents including but not limited to business documents, spreadsheets, database applications, desktop publishing designs, and research papers. Students will also learn how to perform efficient Internet searches and gather credible information while maintaining a secure profile and be aware of their communication interactions while online. This is a project-based course which relies heavily on successful independent work skills. A basic understanding of existing Office programs is suggested.

### **COOPERATIVE WORK PROGRAM – FULL YEAR, 1 CREDIT PER ACADEMIC PERIOD, GRADE 12.**

The Cooperative Education program is designed to combine classroom instruction with on-the-job training in a potential career path. This program integrates classroom studies in employability skills and consumer skills with planned, supervised, and practical work experience. Students will develop personal initiative, learn to work with others, and recognize the importance of appropriate attitude and behavior for the occupation. Maintaining employment and excellent class attendance are essential to successful completion of the course requirements. Acceptance in the program requires the recommendation of the student's guidance counselor, administrator, and an interview with the cooperative education coordinator. Also grades, attendance, and discipline will be considered for acceptance into the program.

### **HOSPITALITY AND TOURISM – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

This is a one semester course that provides students with an overview of the hospitality and tourism industry and the career opportunities within them. Students will be eligible for dual-enrollment credit with Keystone College upon completion of the course. Students will learn basic operations, guest services, accommodation types, marketing and sales, management and ownership responsibilities, food and beverage service, event planning and tour coordination and promotion. Students will gain skills and knowledge of a professional industry that supports the local and regional economy and as well as research the worldwide effect of the hospitality and tourism industry. Students will have the opportunity to meet with representatives from several local attractions as well as working with the visitor's bureau to learn about the region and possibly visit some of the attractions.

### **INTERNATIONAL BUSINESS – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

International Business is designed to introduce students to business principles in a global marketplace. Students will identify business operations in other countries and the challenge created by those differences to Americans trying to conduct business in foreign nations. This will allow students to develop an awareness of cultural differences of countries involved in international trade and relate the importance of business in today's society. Students will explore and identify international business careers and create an International Business Plan.

### **INTRODUCTION TO BUSINESS – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

This is a one semester course designed to provide students with a basic overview of primary business functions. Students may be eligible for dual-enrollment credit upon completion of the course. Rigorous coursework will include an overview of topics such as primary business functions, economic concepts, global business concepts, ethical business standards, small business ownership, finance, marketing and employee management skills. Students will complete a mix of exams and projects, be exposed to speakers from the business industry, and create a business plan. Students taking this course will be prepared for more in-depth business courses offered.

### **OFFICE TECHNOLOGY – 1 SEMESTER, ½ CREDIT, GRADE 12**

This course is designed specifically for seniors to prepare them for entrance into the business and professional workplace. Students will engage in a multi-tiered plan for finding future employment, including: researching a specific career, job search, resume and cover-letter writing. They will be instructed in the current trends and proper procedures in the job acquisition process. Furthermore, students will be designated as an office assistant in on-campus office/classroom environments. They will apply office skills acquired in the class toward practical applications in the completion of these tasks. Student may require administrative approval for admittance to this class.

**PERSONAL BUDGETING AND FINANCE – 1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12**

Personal Budgeting & Finance is designed for the student who has an interest in obtaining an understanding and awareness of the personal finances that occur in our everyday environment after high school. Students will compete and play in Virtual Business-Finance, E-Bucks, The Stock Market Game, and Financial Literacy Challenges. Due to the regional, state, and national competitions within the course, various prizes and scholarships may be won. Topics within the course include, but are not limited to, personal money management, retirement, taxes, credit and insurance.

**VIDEO GAME DESIGN 1 – 1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12**

Video Game Design 1 is a fun and interesting course that encompasses a student's curiosity or knowledge of programming and game design. It introduces students to the fundamentals of video game design and provides a hands-on experience using the Freeware Game Maker game engine. The course includes game-theory reading with game building application lessons by integrating cross-curriculum and STEM activities. Topics include but are not limited to the role of the team, computerized entertainment, game classification, evolution of the game, perspective, scene design, basic animation, collision theory and logic, game systems, personal computers, hardware, play and game culture, reverse engineering, professional reviews, large-scale design process, global economy and supply chain.

**WEB DESIGN – 1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12**

This is a one semester project-based course that provides students with a foundational understanding of web design coding concepts. Student will learn the guidelines for creating in XHTML 1.0 and CSS 2.1. Using the technology provided, students will create basic pages and websites containing various elements that focus on structure and browser compatibility. Students will complete work in various formats including individual hands-on activities, quizzes and large-scale projects. Work will be done in the classroom setting, relying heavily on successful independent work skills.



# CAREER & TECHNICAL ED

## **NOTE: UNIFORMS ARE REQUIRED IN ALL AREAS OF CAREER AND TECH ED.**

**Program of Study (POS):** Programs of Study incorporate secondary education and post-secondary education elements; include coherent and rigorous content aligned with challenging academic standards and relevant career and technical content in a coordinated, non-duplicative progression of courses that align secondary education with postsecondary education to adequately prepare students to succeed in postsecondary education; may include the opportunity for secondary education students to participate in dual or concurrent enrollment programs or other ways to acquire postsecondary education credits and lead to an industry-recognized credential or certificate at the postsecondary level or an associate or baccalaureate degree. **All programs of study are PDE approved.**

[http://www.portal.state.pa.us/portal/server.pt/community/programs\\_of\\_study/7686/framework/679310](http://www.portal.state.pa.us/portal/server.pt/community/programs_of_study/7686/framework/679310)

Students may be eligible for credit at participating PA post-secondary schools.

Please visit the guidance webpage on the Delaware Valley School District website at

<http://dvds.schoolwires.net//Domain/154> to view a listing of the participating schools.

If a senior is in danger of not graduating because of failing grades in courses which are required for graduation, the student will be removed from their CTE class.

## **AUTOMOTIVE MECHANICS 1 – FULL YEAR, 3 PERIODS PER DAY, 3 CREDITS, GRADES 10, 11, 12**

Familiarization with automotive terminology, the theory of engine operation including compression, fuel, ignition, cooling and lubrication systems, as well as preventive maintenance and basic hydraulic brake systems will be the main topics covered. Special emphasis is placed on shop safety and the use of all related hand and power tools. This course will prepare students toward a career as an automotive mechanic, automotive parts specialist, or service advisor. At the completion of the three-year program, the student will have the necessary skills as required to enter the trade. At that time, the student could also enter an automotive technical institute, trade school, or college for a post-secondary education. Students will be given SP-2 Automotive Safety Certification and AP-2 Automotive Environmental Safety & Pollution Prevention Certification. Due to the competency based nature of this course, students that move at an accelerated pace will be able to complete advanced tasks on a case by case basis.

POS- 47.0604 Automobile/Auto Mechanics Technology/Technician

## **AUTOMOTIVE MECHANICS 2 – FULL YEAR, 3 PERIODS PER DAY, 3 CREDITS GRADES 11, 12**

Successful completion of Automotive Mechanics 1 course is recommended for admission into Automotive Mechanics 2. This course is a combination of time in a specialized classroom, shop and live work experiences. Basic AC & DC electrical theory, starting systems, charging systems, an introduction to electronics, an introduction to binary language and computer controls, chassis, suspension, and steering, automotive HVAC and drive trains are the main topics covered. Special emphasis is placed on shop safety and the use of all related hand and power tools. This course will prepare students toward a career as an automotive mechanic, automotive parts specialist, or service advisor. At the completion of the three-year program, the student will have the necessary skills as required to enter the trade. At that time the student could also enter an automotive technical institute, trade school, or college for a post-secondary education. Due to the competency based nature of this course, students that move at an accelerated pace will be able to complete advanced tasks on a case by case basis. Seniors will take the NOCTI Assessment. State required physical education hours will be completed within this course.

POS- 47.0604 Automobile/Auto Mechanics Technology/Technician

### **AUTOMOTIVE MECHANICS 3 — FULL YEAR, 3 PERIODS PER DAY, 3 CREDITS, GRADE 12**

Successful completion of Automotive Mechanics 2 is recommended for admission into Automotive Mechanics 3. This course is a combination of time in a specialized classroom, shop and live work experiences. The diagnosis, maintenance and repair of automotive systems including engines, drive train, chassis, steering alignment and electrical systems are the main topics covered. Students will also be given the opportunity to use scan tools, DVOM's and other specialized equipment to troubleshoot modern computerized engine and brake systems. Special emphasis is placed on shop safety and the use of all related hand and power tools. This course will prepare students toward a career as an automotive mechanic, automotive parts specialist, or service advisor. At the completion of the three-year program, the student will have the necessary skills as required to enter the trade. At that time the student could also enter an automotive technical institute, trade school or college for a post-secondary education. Students will be given SP-2 Automotive Safety Certification and AP-2 Automotive Environmental Safety & Pollution Prevention Certification. The NOCTI Automotive Technician Assessment will be administered. Due to the competency based nature of this course, students that move at an accelerated pace will be able to complete advanced tasks on a case by case basis. Students that complete all of the competencies for this course may have the opportunity to be engaged in a capstone placement for some of their senior year. State required physical education hours will be completed within this course.

POS- 47.0604 Automobile/Auto Mechanics Technology/Technician

### **BUILDING CONSTRUCTION OCCUPATIONS 1 — FULL YEAR, 3 PERIODS PER DAY, 3 CREDITS, GRADES 10, 11, 12**

As an introductory course to building trades, students will be provided with specialized training in the construction field. Safe use of hand and power tools will be a fundamental aspect of the course instruction. In addition, students will be provided with practical application opportunities to apply the theory and skills taught in the classroom. Group projects will be designed to enhance the skills of each student. This course provides the foundation for students considering a career in the building trades. Students will be able to take SP-2 Safety Certification. Due to the competency based nature of this course, students that move at an accelerated pace will be able to complete advanced tasks on a case by case basis. POS- 46.9999- Construction Trades

### **BUILDING CONSTRUCTION OCCUPATIONS 2 — FULL YEAR, 3 PERIODS PER DAY, 3 CREDITS, GRADES 11, 12**

Successful completion of Building Construction Occupations 1 is recommended for admission into Building Construction Occupations 2. This class provides more specialized instruction in the building trades. Specific skills, knowledge and attitudes necessary for successful participation in a particular job will be completed as part of the course. Students will be provided with an overview of multiple building trade careers. Occupational standards for a particular building trade designation will be built-in to the course. This course provides specialized instruction for students considering a career in the building trades. Seniors will take the NOCTI Assessments. Due to the competency based nature of this course, students that move at an accelerated pace will be able to complete advanced tasks on a case by case basis. State required physical education hours will be completed within this course. POS- 46.9999- Construction Trades.

### **BUILDING CONSTRUCTION OCCUPATIONS 3 — FULL YEAR, 3 PERIODS PER DAY, 3 CREDITS, GRADE 12**

Successful completion of the Building Construction Occupations 2 course is recommended for admission into Building Construction Occupations 3. This course of study in building construction is designed to meet the needs of secondary students who seek specialized training in order to enter the labor market. Opportunities will be provided to encourage development of skill, knowledge and attitudes necessary for the student to function on the job, as well as enhance his citizenship qualities. Those students showing leadership qualities will have the opportunity to exercise and develop those qualities. Group projects will be designated to encourage work cooperation and provide leadership functions. Safety on the job and adherence of good working standards will be a regular consideration. Pride and dignity of work accomplishments will be of utmost importance. This advanced course in Building Construction Occupations is designed to prepare students with the necessary skills to enter the trade. Students at the completion of the course will be prepared to enter a technical institute, trade school, or college for post-secondary education. Students will be able to take SP-2 Safety Certification. Seniors will take the NOCTI Assessments. Due to the competency based nature of this course, students that move at an accelerated pace will be able to complete advanced tasks on a case by case basis. Students that complete all of the competencies for this course may have the opportunity to be engaged in a capstone placement for some of their senior year. State required physical education hours will be completed within this course.

POS- 46.9999- Construction Trades

### **DIVERSIFIED OCCUPATIONS — Grade 12**

The Diversified Occupations program is designed to combine classroom instruction with on-the-job training in a career area of the student's choice. Students will obtain skills in an occupational area that is not taught in the high school and will prepare students for new and futuristic careers. This program integrates classroom studies in employability skills and consumer skills with planned, supervised, and practical work experience. Students will develop personal initiative, learn to work with others, and recognize the importance of appropriate attitude and behavior for the occupation. Maintaining employment and excellent class attendance are essential to successful completion of the course requirements. Acceptance in the program requires the recommendation of the student's guidance counselor, administrator, and an interview with the cooperative education/diversified occupations coordinator. Also grades, attendance, and discipline will be considered for acceptance into the program. Students can earn customer service and OSHA 10 certifications. Student will also take the NOCTI skills assessment. Students will have a dual enrollment opportunity to receive college credits upon successful completion of the course.

POS-32.0105-Job Seeking/Changing Skills (Diversified Occupations)

### **EARLY CHILDHOOD EDUCATION 1 — FULL YEAR, 3 PERIODS PER DAY, 3 CREDITS, GRADES 10, 11, 12**

This program of study is the first of three courses that prepare students for a career in working with young children. It prepares students to further their education to pursue a Bachelor's degree in Early Childhood Education and child services careers. The course emphasizes learning experiences to gain knowledge and understanding of the cognitive, physical, social, and emotional development of infants and toddlers. Students learn to prepare classroom curriculum and strategies for working with infants and toddlers. Students will have opportunities to apply their learning through participation and observation of children individually and in groups. Field experiences will occur at PA licensed child care centers and at other community programs. American Heart Association Certification in Pediatric First Aid & CPR is available to students. Due to the competency based nature of this course, students that move at an accelerated pace will be able to complete advanced tasks on a case by case basis.

POS- 19.0708 Child Care and Support Services Management

### **EARLY CHILDHOOD EDUCATION 2 — FULL YEAR, 3 PERIODS PER DAY, 3 CREDITS, GRADES 11, 12**

This program of study follows the successful completion of Level 1 ECE, which continues to prepare students for a career in working with young children. It prepares students to further their education to pursue a Bachelor's degree in Early Childhood Education and child services careers. The course emphasizes learning experiences to gain knowledge and understanding of the cognitive, physical, social, and emotional development of preschool children. Students learn to prepare classroom curriculum and strategies for working with preschoolers. Students will have opportunities to apply their learning through participation and observation of children individually and in groups. Students will plan and teach theme activities two days a week to the children enrolled in the DVHS Preschool. American Heart Association Certification in Pediatric First Aid & CPR is available to students. Due to the competency based nature of this course, students that move at an accelerated pace will be able to complete advanced tasks on a case by case basis. Seniors will take the NOCTI Assessment. State required physical education hours will be completed within this course.

POS- 19.0708 Child Care and Support Services Management

### **EARLY CHILDHOOD EDUCATION 3 — FULL YEAR, 3 PERIODS PER DAY, 3 CREDITS, GRADE 12**

This program of study along with successful completion of levels 1 and 2 continues to prepare students for a career educating young children and further higher education to pursue a Bachelor's degree in early childhood education and child services careers. The course emphasizes learning experiences to gain knowledge and understanding of the intellectual, physical, social, and emotional development of children from birth to age 9. Students learn to prepare classroom curriculum and strategies for working with children. Students will have opportunities to apply their learning through participation and observation of children individually and in groups. Field experiences will occur at Delaware Valley Elementary School. American Heart Association Certification in Pediatric First Aid & CPR is available to students. Due to the competency based nature of this course, students that move at an accelerated pace will be able to complete advanced tasks on a case by case basis. Students that complete all of the competencies for this course may have the opportunity to be engaged in a capstone placement for some of their senior year. State required physical education hours will be completed within this course.

POS- 19.0708 Child Care and Support Services Management

### **ELECTRICAL OCCUPATIONS 1 — FULL YEAR, 3 PERIODS PER DAY, 3 CREDITS, GRADES 10, 11, 12**

This course is an introduction to careers in electrical occupations. Students will gain an understanding of practical electrical applications and theory. Students will apply the theory in hands-on projects and laboratory experiments. This course will establish a foundation for students interested in pursuing a career in electrical occupations. Students will be able to take SP-2 Safety Certification. Due to the competency based nature of this course, students that move at an accelerated pace will be able to complete advanced tasks on a case by case basis.

POS- 46.0399 Electrical and Power Transmission Installers,

### **ELECTRICAL OCCUPATIONS 2 — FULL YEAR, 3 PERIODS PER DAY, 3 CREDITS, GRADES 11, 12**

Successful completion of the Electrical Occupations 1 course is recommended for Electrical Occupations 2. This course will expand upon electrical theory and practical application skills developed in the level one course. Students will be expected to develop knowledge of the principles of electricity, residential wiring, and commercial wiring and industrial electricity. Seniors will take the NOCTI Assessment. Due to the competency based nature of this course, students that move at an accelerated pace will be able to complete advanced tasks on a case by case basis. State required physical education hours will be completed within this course.

POS- 46.0399 Electrical and Power Transmission Installers

### **ELECTRICAL OCCUPATIONS 3 — 2 SEMESTERS, 3 PERIODS PER DAY, 3 CREDITS, GRADE 12**

It is recommended that students enrolling in the Level 3 course have successfully completed Level 2. Individualized, competency based course focuses on the practical application skills of the theory and concepts developed throughout the previous courses. Course standards are more rigorous and are designed to prepare students for a career in electrical occupations or for specialized training in the field. Students will be able to take SP-2 Safety Certification. Seniors will take the NOCTI Assessment. Due to the competency based nature of this course, students that move at an accelerated pace will be able to complete advanced tasks on a case by case basis. Students that complete all of the competencies for this course may have the opportunity to be engaged in a capstone placement for some of their senior year. State required physical education hours will be completed within this course.

POS- 46.0399 Electrical and Power Transmission Installers

### **CULINARY ARTS 1 — FULL YEAR, 3 PERIODS PER DAY, 3 CREDITS, GRADES 10, 11, 12**

Students are introduced to the culinary service field. They are trained in multiple aspects of food service and production. Students receive direct instruction on specific skills and have multiple opportunities to practice/implement and demonstrate proficiency. Due to the competency based nature of this course, students that move at an accelerated pace will be able to complete advanced tasks on a case by case basis. POS- 12.0508 Institutional Food Workers

### **CULINARY ARTS 2 — FULL YEAR, 3 PERIODS PER DAY, 3 CREDITS, GRADES 11, 12**

Successful completion of the food management level I course is recommended for registration in the level 2 class. Food management students expand upon the foundation skills developed in the level I course. Students will be responsible for menu planning, estimating quantities for daily and weekly needs, food and supply ordering, sanitation, inventory control and actual food preparation skills. Nutrition and dietary considerations will be explored as part of the menu planning process. The course is designed to prepare students for a career in the culinary field (food preparation or service). Certifications available for seniors through this course are NOCTI Assessment, and Serv-Safe Certification. Due to the competency based nature of this course, students that move at an accelerated pace will be able to complete advanced tasks on a case by case basis. Seniors will take the NOCTI Assessment. State required physical education hours will be completed within this course. POS- 12.0508 Institutional Food Workers

### **CULINARY ARTS 3 — FULL YEAR, 3 PERIODS PER DAY, 3 CREDITS, GRADE 12**

Successful completion of the food management level 2 course is recommended for registration in level 3. Level 3 students will be prepared to work in multiple aspects of food management and production. Students will order, prepare, cook and provide service to patrons in a restaurant setting. Student instruction also explores the variation of food preparation, menu planning, ordering, and inventory for multiple environments (restaurant, cafeteria, and institutions). Students completing this course will be prepared to enter the food services or attend specialized training in the culinary field. Certifications available for seniors through this course are NOCTI Assessment, and Serv-Safe Certification. Due to the competency based nature of this course, students that move at an accelerated pace will be able to complete advanced tasks on a case by case basis. Students that complete all of the competencies for this course may have the opportunity to be engaged in a capstone placement for some of their senior year. State required physical education hours will be completed within this course.

POS- 12.0508 Institutional Food Workers

### **HEALTHCARE CAREERS 1** — FULL YEAR, 3 PERIODS PER DAY, 3 CREDITS, GRADES 10, 11, 12

The Health Occupations program is designed to promote careers in health care and prepare graduates for post-secondary education. Level 1 introduces students to various health related careers through exploration of job descriptions and educational requirements. This course also includes but not limited to an introduction to medical terminology, anatomy and physiology, infection control, ethics, HIPAA and OSHA regulations. An introduction to basic clinical skills such as bed making, temperature, pulse, respirations, blood pressure & body mechanics is also integrated into curriculum. Enrollment in mathematics and science is required in conjunction with this program. Due to the competency based nature of this course, students that move at an accelerated pace will be able to complete advanced tasks on a case by case basis.

POS- 51.9999 Health Professionals and Related Clinics Sciences

### **HEALTHCARE CAREERS 2** — FULL YEAR, 3 PERIODS PER DAY, 3 CREDITS, GRADES 11, 12

Successful completion of Health Occupations 1 is recommended for registration. Level 2 continues to promote health care careers and preparation for post-secondary education. Students will explore their interests in the medical field and investigate colleges and technical schools to pursue a health care career. This course includes but not limited to medical terminology, infection control, HIPAA, OSHA regulations, diagnosis, treatment & control of disease. Clinical skills are focused on patient personal care, urinary & bowel elimination, nutrition and hydration, rehabilitation and restorative care, body mechanics, & allied health skills. Students will also receive training in American Heart Association Basic Life Support for the Health Care Provider and will receive certification upon successful completion of the training. Students can receive certification in CPR/AED. Seniors will take the NOCTI Assessment. Due to the competency based nature of this course, students that move at an accelerated pace will be able to complete advanced tasks on a case by case basis. State required physical education hours will be completed within this course.

POS- 51.9999 Health Professionals and Related Clinics Sciences

### **HEALTHCARE CAREERS 3** — FULL YEAR, 3 PERIODS PER DAY, 3 CREDITS, GRADE 12

Successful completion of Health Occupations 2 is recommended for registration into Health Occupations 3. Level 3 completes the Health Occupations program. Students will continue to explore health care careers and focus in a specific career of interest. Students are guided as they plan for their post-secondary education. During their final year in the program, students are given the opportunity for a job shadowing experience in a career of their interest. A clinical rotation at a local nursing home and hospital is required. Students will apply clinical skills learned in a real life setting. Students will also take a National Occupational Competency Testing Institute (NOCTI) exam and will receive a certificate upon passing this exam. The certification is desirable to colleges and further employees. The certification also provides students with a great sense of accomplishment and pride. Students can receive certification in CPR/AED. Seniors will take the NOCTI Assessment. Due to the competency based nature of this course, students that move at an accelerated pace will be able to complete advanced tasks on a case by case basis. Students that complete all of the competencies for this course may have the opportunity to be engaged in a capstone placement for some of their senior year. State required physical education hours will be completed within this course.

POS- 51.9999 Health Professionals and Related Clinics Sciences,

**MARKETING AND BUSINESS 1 — FULL YEAR, 3 PERIODS PER DAY, 3 CREDITS, GRADES 10, 11, 12**

This course is the introductory course to a three-year instructional Marketing program of study to prepare students for a career in advertising, marketing, public relations and sales. Through actively participating in the Marketing program students will develop leadership ability, strengthen communication skills and demonstrate the professional skills necessary to succeed in today's business world. Topics include but are not limited to: advertising, retailing, merchandising, business operations, promotion, selling, economics, financing, distribution, inventory control, pricing, entrepreneurship and professional development. Students will work individually and as a team on business projects and learn from experienced business professionals and mentors. Students in the program will also be responsible for the operations and management of the DV Warrior Pride School Store. Upon completion, students can enter into the workforce or continue to pursue a post-secondary degree in business/marketing. Concurrent enrollment in college courses and the customer service certification are available for students. Due to the competency-based nature of this course, students that move at an accelerated pace will be able to complete advanced tasks on a case by case basis.

POS-52.1801 Sales, Distribution and Marketing Operations, General

**MARKETING AND BUSINESS 2 — FULL YEAR, 3 PERIODS PER DAY, 3 CREDITS, GRADES 11, 12**

This program of study follows the successful completion of Business and Marketing Level 1 which continues to prepare students for a career in advertising, marketing, public relations and sales. Through actively participating in the Marketing program students will further develop leadership ability, strengthen communication skills and demonstrate the professional skills necessary to succeed in today's business world. A strong emphasis will be on visual merchandising, forms of advertising including social media advertising, promotion, creating a marketing plan, pricing and distribution. Students will work individually and as a team on business projects and learn from experienced business professionals and mentors. Students in the program will also be responsible for the operations and management of the DV Warrior Pride School Store. Upon Completion, students can enter into the workforce or continue to pursue a post-secondary degree in business/marketing. Senior students will be taking NOCTI skill assessment. Concurrent enrollment in college courses and the OSHA 10 certification are available for students. due to the competency-based nature of this course, students that move at an accelerated pace will be able to complete advanced tasks on a case by case basis.

POS-52.1801 Sales, Distribution and Marketing Operations, General

**MARKETING AND BUSINESS 3 – FULL YEAR, 3 PERIODS PER DAY, 3 CREDITS, GRADE 12**

This program of study follows the successful completion of Business and Marketing levels 1 and 2 which continues to prepare students for a career in advertising, marketing, public relations and sales. Through actively participating in the Marketing program students will further develop leadership ability, strengthen communication skills and demonstrate the professional skills necessary to succeed in today's business world. A strong emphasis will be selling, management, entrepreneurship, creating a marketing plan and sales presentation, and preparation for a career in marketing/business. Students will work individually and as a team on business and community projects and also be responsible for the operations and management of the DV Warrior Pride School Store. Upon completion, students can enter into the workforce or continue to pursue a post-secondary degree in business/marketing. Concurrent enrollment in college courses and the A.S.K. marketing certification are available for students. Students will be taking NOCTI skill assessment. Students that complete all of the competencies for this course may have the opportunity to be engaged in a capstone placement or internship for some of their senior year. Due to the competency-based nature of this course, students that move at an accelerated pace will be able to complete advanced tasks on a case by case basis.

POS- 52.1801 Sales, Distribution and Marketing Operations, General



# ENGINEERING

## **INTRODUCTION TO ENGINEERING DESIGN** – FULL YEAR, 1 CREDIT, GRADES 9, 10, 11, 12

This course is the first course in the PLTW Pathway to Engineering program. Introduction to Engineering Design (IED) is a high school level foundation course in the PLTW Engineering Program. In IED students are introduced to the engineering profession and a common approach to the solution of engineering problems, an engineering design process. Utilizing activity-project-problem-based learning, students will progress from completing structured activities to solving open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills. Through both individual and collaborative team activities, projects, and problems, students will problem solve as they practice common engineering design and development protocols such as project management and peer review. Students will develop skill in technical representation and documentation of design solutions according to accepted technical standards, and they will use current 3D design and modeling software to represent and communicate solutions. In addition, the development of computational methods that are commonly used in engineering problem solving, including statistical analysis and mathematical modeling, are emphasized. Ethical issues related to professional practice and product development are also presented. College credit through RIT is available upon successful completion of the course.

## **PRINCIPLES OF ENGINEERING DESIGN** – FULL YEAR, 1 CREDIT, GRADES 10, 11, 12

Principles of Engineering (POE) is a high school level foundation course in the PLTW Engineering Program. This survey course exposes students to some of the major concepts that they will encounter in a postsecondary engineering course of study. Through problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, electrical circuits, thermodynamics, the strength of materials and structures, automation, and kinematics. The course applies and concurrently develops secondary level knowledge and skills in mathematics, science, and technology. Students have the opportunity to develop skills and understanding of course concepts through activity, project, and problem-based (APB) learning. By solving rigorous and relevant design problems using engineering and science concepts within a collaborative learning environment, APB learning challenges students to continually hone their interpersonal skills, creative abilities, and problem solving skills. Students will also learn how to document their work and communicate their solutions to their peers and members of the professional community. It also allows students to develop strategies to enable and direct their own learning. College credit through RIT is available upon successful completion of the course.

## **DIGITAL ELECTRONICS** – FULL YEAR, 1 CREDIT, GRADES 11, 12

This course is the study of electronic circuits that are used to process and control digital signals. In contrast to analog electronics, where information is represented by a continuously varying voltage, digital signals are represented by two discrete voltages or logic levels. This distinction allows for greater signal speed and storage capabilities and has revolutionized the world electronics. Digital electronics is the foundation of all modern electronic devices such as cellular phones, MP3 players, laptop computers, digital cameras, high definition televisions, etc. The major focus of the Engineering 3 course is to expose students to the design process of combinational and sequential logic design, teamwork, communication methods, engineering standards, and technical documentation. Utilizing the activity-project-problem-based teaching and learning pedagogy, students will analyze, design and build digital electronic circuits. While implementing these designs students will continually hone their interpersonal skills, creative abilities and understanding of the design process. College credit through RIT is available upon successful completion of the course.

**ENGINEERING DESIGN & DEVELOPMENT** — FULL YEAR, 1 CREDIT, GRADE 12

In this capstone course, students work in teams to design and develop an original solution to an approved open-ended technical problem by applying the engineering design process and using skills developed in the previous three engineering courses. Students perform research to choose, validate, and justify a technical problem. After carefully defining the problem, teams design, build, and test their solutions. Local industry professionals provide mentoring for the students. Finally, student teams present and defend their original solution to an outside panel. This course is appropriate for 12<sup>th</sup> grade students who have successfully completed Introduction to Engineering Design, Principles of Engineering, and Digital Electronics.

# ENGLISH

## **CONCEPTS OF ENGLISH 9 – FULL YEAR, 1 CREDIT, GRADE 9**

This course is a skills-based class that will allow students to develop the basic skills necessary for success by moving more slowly and including more guided practice than English 9. It will provide the opportunity for in-depth exploration of the writing process, focusing on the basic concepts of paragraph development, organization, and unity as well as transitions, verb tense, and sentence structure. Students will learn basic composition components, pre-writing (brainstorming, outlining, etc.), drafting (focus, content, organization), editing (mechanics and style), and publishing and presentation. Students will write and evaluate their own, peer, and anchor papers or constructed-responses, argumentative, and informative writing. Narrative writing will also be addressed. This course will focus also on developing reading comprehension skills. In addition, the study of grammar, literature, nonfiction, poetry, vocabulary, and research skills will occur. All objective and written assessments are based on Pennsylvania Core Standards and Keystone Eligible Content and focus on the skills required to achieve proficiency on the Pennsylvania Keystone Exam. A research paper is a course requirement.

## **ENGLISH 9 – FULL YEAR, 1 CREDIT, GRADE 9**

This course will provide the opportunity for an in-depth individual and collaborative exploration of the writing process, focusing on constructive-responses, argumentative, and informative writing. Narrative writing will also be addressed. Students will review composition components, pre-writing (brainstorming, outlining, etc.), drafting (focus, content, organization), editing (mechanics and style), and publishing and presentation. Students will write and evaluate their own, peer, and anchor papers for constructed-responses, argumentative, and informative writing. Fiction, nonfiction, and poetry will be used to help students improve reading comprehension and critical thinking skills. In addition, students will study vocabulary and grammar and work to develop research skills in an effort to improve writing. All objective and written assessments are based on Pennsylvania Core Standards and Keystone Eligible Content and focus on the skills required to achieve proficiency on the Pennsylvania Keystone Exam. A research paper is a course requirement.

## **COMBO ENGLISH 9– FULL YEAR; 1 CREDIT ENGLISH/1 CREDIT SOCIAL STUDIES, GRADE 9**

This team-taught, interdisciplinary course is designed to provide students with a better understanding and command of writing, vocabulary, grammar, research, literature, debate, and presentation as they relate to crucial events in American history from Reconstruction through the present day. The course focuses on Pennsylvania Core standards and Keystone Eligible Content. Throughout this course, students will read various pieces of literature and nonfiction, related to American history, and incorporate them into writing assignments, including constructed-responses and informative, argumentative, and analytical essays. A brief review of basic grammar concepts will occur, with additional units on grammar, usage, and mechanics to follow. In addition, students will debate their peers and create original works for presentation. This course is designed for students who enjoy public speaking. Students must also work well in groups. There is a community service component to this course. A research paper is a course requirement. Eighth grade English and Social Studies teachers will recommend students for this program. This course must be taught in conjunction with Combo American Studies.

### **HONORS ENGLISH 9 — FULL YEAR, 1 CREDIT, GRADE 9**

This course is significantly more difficult, covering more material, going into greater depth, and moving faster than English 9. Students in this course must have strong skills in reading, writing, and grammar. This course will provide the opportunity for an in-depth individual and collaborative exploration of the writing process, focusing on constructed-response, literary analysis, argumentative, and informative writing. Narrative writing will also be addressed. Students will work to improve the stylistic aspects of their writing going beyond basic writing skills. Students will write and evaluate their own, peer, and anchor papers for constructed-response, literary analysis, argumentative and informative writing. Fiction, nonfiction, and poetry will be used to help students master reading comprehension and critical thinking skills. In addition, students will study vocabulary and grammar, and they will work to develop research skills in addition to speaking and listening skills. All objective and written assessments are based on Pennsylvania Core Standards and Keystone Eligible Content and focus on the skills required to achieve proficiency on the Pennsylvania Keystone Exam. Students will be required to do extensive outside reading during the course of the school year. A research paper and summer reading are also required components of this course.

### **CONCEPTS OF ENGLISH 10 — FULL YEAR, 1 CREDIT, GRADE 10**

This course is a skills-based class that will allow students to develop the basic skills necessary for success by moving more slowly and including more guided practice than English 10. As a result, this course will provide the English student in need of additional support with a better understanding and command of vocabulary, grammar, writing, research, nonfiction, and literature. This comprehensive, standards-based course incorporates the analysis of both world and American literature and the essential development of students' writing and thinking skills. The literature presented and discussed in this course stands as a sampling of world and American literary works from the following literary genres: poetry, drama, short stories, the novel, and non-fiction. All objective and written assessments are based on Pennsylvania Core Standards and Keystone Eligible Content and focus on the basic skills required to achieve proficiency on the Pennsylvania Keystone Exam. Students' reading skills are assessed not only with objective standards-based quizzes and tests, but also with written answers to constructed-response questions. A supplementary objective of this course is to develop and improve students' writing skills. Thus, students will review and be assessed on basic grammar, punctuation, usage, and mechanics. A research paper is a course requirement.

### **ENGLISH 10 — FULL YEAR, 1 CREDIT, GRADE 10**

This comprehensive, standards-based course incorporates the critical study of both world and American literature and the continued development of students' writing and critical-thinking skills. The literature analyzed and discussed in this course, stands as a representative sampling of world and American literary works from the following literary genres: poetry, drama, short stories, the novel, and non-fiction. All objective and written assessments are based on Pennsylvania Core Standards and Keystone Eligible Content and focus on the skills required to achieve proficiency on the Pennsylvania Keystone Exam. Students' critical reading skills are assessed not only with objective standards-based quizzes and tests, but also with written answers to constructed-response questions. An additional objective of this course is to improve students' writing skills. Thus, students will review and be assessed on grammar, punctuation, usage, and mechanics. A research paper is a course requirement.

**COMBO ENGLISH 10— FULL YEAR; 1 CREDIT ENGLISH/1 CREDIT SOCIAL STUDIES, GRADE 10**

This standards-based course combines English 10, which incorporates the analysis of American and world literature, and World Studies, which explores the cultures of Europe, India, China, Japan, Africa, Middle East, Southeast Asia and Latin America. English 10 and World Studies is a team-taught course that provides the student with a greater understanding of how literature and history are interwoven to express the cultural heritage of the ethnic groups living in specific regions of the world. Both objective and subjective assessments are based on Pennsylvania Core Standards and Keystone Eligible Content and focus on the skills necessary to achieve proficiency on the Pennsylvania Keystone Literature Exam and the SAT. Critical reading skills, especially those close and analytical in nature are evaluated with objective standards-based assessments and constructed-response questions. Improvement of students' writing with careful stress on developing elevated diction and more complex, refined syntax is also addressed within the realm of the curriculum, and students' writing, which includes constructed-responses and informative, argumentative and analytical essays, will be scored based on their command of the English language with an emphasis on modeled, studied writing styles, as well as personal writing style. A strong emphasis is placed on oral and written communication skills and cooperative learning activities. Students must also work well in groups. This course involves a community service component. The ninth grade English and Social Studies teachers will recommend students for this course. Summer reading will be assigned for this course. A research paper is a course requirement. This course will be taught in conjunction with Combo World Studies.

**HONORS ENGLISH 10 — FULL YEAR, 1 CREDIT, GRADE 10**

This accelerated, standards-based course incorporates the critical and analytical study of both world and American literature and the continued development of students' analytical writing and critical-thinking skills. The literature analyzed and discussed in this course, stands as a representative sampling of world and American literary works from the following literary genres: poetry, drama, short stories, the novel, and nonfiction. All objective and written assessments are based on Pennsylvania Core Standards and Keystone Eligible Content and the focus on enhancing the skills required to achieve proficiency on the Pennsylvania Keystone Exam and the SAT. Students' critical reading skills are assessed not only with objective standards-based quizzes and tests, but also with written answers to constructed-response questions and analytical essays. An additional objective of this course is to augment students' overall writing skills. Thus, students will review and be assessed on sophisticated grammar, punctuation, usage, and mechanics. Both the literary study and writing components of this course help to develop and enhance skills required to be successful in Advanced Placement courses. Summer reading and a research paper are course requirements.

## **ADVANCED PLACEMENT ENGLISH LANGUAGE AND COMPOSITION — FULL YEAR, 1 CREDIT, GRADES 11, 12**

Students in the Advanced Placement English Language and Composition course read and carefully analyze a broad and challenging range of prose selections, predominantly nonfiction, taken from a variety of periods, disciplines, and genres. In so doing, students develop their awareness of how language works—how writers and public speakers conscientiously use rhetorical and stylistic devices and strategies to most effectively craft their compositions. Through close critical reading and frequent writing (averaging more than one final draft each week), students develop their ability to work with language and text with a greater awareness of audience, purpose, and strategy, while strengthening their own composing abilities. Reading assignments, which are copious, feature expository, analytical, and argumentative essays from a variety of authors, mostly American, and from a wide range of historical contexts. Ancillary to the principal study of rhetoric and composition, the course will also provide an introduction to the elements of argument, logic, and semantics, and an overview of the history of the English language. As this is a college-level course, performance expectations are high, and the workload is demanding. Students are expected to complete a minimum of five hours of coursework a week outside of class. There is summer work for this course. All students completing the course are expected to take the advanced placement examination. Students may be able to earn college credits with an appropriate score on the AP Exam.

## **CONCEPTS OF ENGLISH 11 — FULL YEAR, 1 CREDIT, GRADE 11**

This course is a skills-based class that will allow students to develop the basic skills necessary for success by moving more slowly and including more guided practice than English 11. As a result, this course, which continues to review the skills taught in Concepts of English 10, will provide the English student in need of additional support with a better understanding and command of vocabulary, grammar, writing, research, nonfiction, and literature. This comprehensive, standards-based course serves as a second half of the Concepts English 10 curriculum, incorporating the analysis of both and the essential development of students' writing and thinking skills. The literature presented and discussed in this course stands as a sampling of world and American literary works from the following genres: poetry, drama, short stories, the novel, and nonfiction. All objective and written assessments are based on Pennsylvania Core Standards. This course will also provide remediation for students who did not achieve proficiency on the Pennsylvania Keystone Exam. Students' reading skills are assessed not only with objective standards-based quizzes and tests, but also with written answers to constructed-response questions. A supplementary objective of this course is to develop and improve students' writing skills. Thus, students will review and be assessed on basic grammar, punctuation, usage, and mechanics. A research paper is a course requirement.

## **ENGLISH 11 — FULL YEAR, 1 CREDIT, GRADE 11.**

This comprehensive, standards-based course which incorporates the critical study of both world and American literature and the continued development of students' writing and critical-thinking skills serves as a second half of the world and American literature curriculum. The literature analyzed and discussed in this course stands as a representative sampling of world and American literary works from the following genre: poetry, drama, short stories, the novel, and nonfiction. All objective and written assessments are based on Pennsylvania Core Standards. This course will also provide remediation for students who did not achieve proficiency on the Pennsylvania Keystone Exam. Students' critical reading skills are assessed not only with objective standards-based quizzes and tests, but also with written answers to constructed-response questions. An additional objective of this course is to improve students' writing skills. Thus, students will review and be assessed on grammar, punctuation, usage, and mechanics. A research paper is a course requirement.

### **COMBO ENGLISH 11— FULL YEAR; 1 CREDIT ENGLISH/1 CREDIT SOCIAL STUDIES, GRADE 11**

This standards-based course combines English 11, which incorporates the analysis of American and world literature and the government of the United States of America. This team-taught course provides the student with a greater understanding of how literature and history are interwoven. Both objective and subjective assessments are based on Pennsylvania Core Standards and the skills necessary to meet with success on the SAT. Critical reading skills are evaluated with objective standards-based assessments and constructed-response questions. Improvement of students' writing with careful stress on developing elevated diction and more complex, refined syntax is also addressed within the realm of the curriculum and students' writing. This will include constructed-responses and informative, argumentative, and analytical essays.

The Social Studies component is designed to challenge students to identify, explain, and apply concepts and principles of American Government history and in today's world. Students will explore the topics of America's political foundations, the Constitution, federalism, political beliefs and behavior, interest groups, elections and the media, the structure and powers of federal and local government, comparative political systems, civil rights and civil liberties. It will also include foreign, domestic and economic policy.

A strong emphasis is placed on oral and written communication skills and cooperative learning activities; therefore, the students must work well in groups. This course involves a unique community service component. The tenth grade English and Social Studies teachers will recommend students for this course. It will also provide remediation for students who did not achieve proficiency on the Pennsylvania Keystone Exam. Summer reading will be assigned for this course, and a research paper is a course requirement. This course must be taught in conjunction with Combo American Government.

### **ADVANCED PLACEMENT ENGLISH LITERATURE AND COMPOSITION—FULL YEAR, 1 CREDIT, GRADE 12**

The Advanced Placement English Literature and Composition course is similar in nature to an introductory college-level course in literature. Literary works are studied in their historical context and in relation to students' lives and experiences. Representative works from various genres and periods are studied. Writing is an integral part of the Advanced Placement English course. Writing assignments focus on the critical analysis of literature and an appreciation of literary artistry and include expository, analytical, and argumentative essays. There is summer work for this course. All students completing the course are expected to take the AP exam. Students may be able to earn college credits with an appropriate score on the AP Exam.

### **CONCEPTS OF ENGLISH 12 — FULL YEAR, 1 CREDIT, GRADE 12**

The purpose of this senior year (12<sup>th</sup> grade) literature course, which will move more slowly and provide more guided practice and skills remediation than English 12, is to review the basic skills taught in Concepts of English 11 and empower students to develop an understanding and appreciation of contemporary literature through integrated educational experiences of reading, writing, speaking, viewing, and listening. Each of the four (4) marking periods will emphasize one contemporary theme: Man's Inhumanity to Man; Coming of Age in the 21<sup>st</sup> Century; Conflict, Renewal, and Voices of Change; and, Being an American: Past, Present, and Future. Through additional support, this course will allow students to explore these important themes while attaining an increased command of vocabulary, grammar, writing, research, nonfiction, and literature. Students' critical reading and analysis skills will be assessed not only with objective standards-based quizzes and tests, but also with written answers to constructed-response questions, creative essay prompts, and reflective narratives. A research paper on a contemporary American subject or issue is a course requirement.



### **ENGLISH 12 – FULL YEAR, 1 CREDIT, GRADE 12**

The purpose of this senior (12<sup>th</sup> grade) literature course is to empower students to develop a fundamental knowledge of and a critical appreciation of contemporary literature through integrated educational experiences of reading, writing, speaking, viewing, and listening. After a brief review of the history and influence of canonical literature, emphasis is placed on representative contemporary literature, with its varied cultural influences, highlighting the major genres, themes, issues, and influences. Each of the four (4) marking periods will emphasize one contemporary theme: Man's Inhumanity to Man; Coming of Age in the 21<sup>st</sup> Century; Conflict, Renewal, and Voices of Change; and, Being an American: Past, Present, and Future. Students will be challenged to think, to write, and to collaborate critically and imaginatively on the content they are reading, viewing, and studying. Students' critical reading and analysis skills will be assessed not only with objective standards-based quizzes and tests, but also with written answers to constructed-response questions, creative essay prompts, and reflective narratives. Students also will review and be assessed on grammar, punctuation, vocabulary, and usage. A research paper on a contemporary American subject or issue is a course requirement.

### **EFFECTIVE WRITING – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

As the title of the course suggests, this is a writing-intensive class, focusing on the art of writing as seen through fiction, non-fiction, drama, and poetry. The central focus of this course is to make students better writers by means of exposing them to various writing functions. This course allows for appreciation of both writing and literature, using many texts and procedural forms.

### **JOURNALISM 1 – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

This course will provide a background in the rights and responsibilities of journalists. It is a highly intensive writing course that will provide students with the outlet of writing for the school newspaper. Students will be required to write news, sports, editorial and feature stories. In addition, they will develop interviewing skills while fine tuning existing speaking and listening skills. Furthermore, it involves all areas of design, photography, style, editing and grammar and usage concepts. Since students are expected to keep up with current events, both reading daily newspapers and watching the news are required.

### **JOURNALISM II – FULL YEAR, 1 CREDIT, GRADES 11, 12**

This course will provide instruction on how to produce and design a successful school newspaper. It will involve all areas of writing, design, style, photography, editing and grammar and usage concepts. Students will need to use the software program Adobe InDesign to design the school's newspaper. Furthermore, students will need to be actively involved in keeping up with current events within the school community. This class is strongly recommended for those who are planning to pursue a career in journalism. It will also cover topics such as style, editing, caption and headline writing and careers in journalism. Students must have successfully completed Journalism I and received a recommendation from the Journalism I teacher.

### **JOURNALISM III – FULL YEAR, 1 CREDIT, GRADES 12**

This advanced level journalism course will be a two semester class that will develop and produce the school's newspaper. Students must have successfully completed Journalism II and received a recommendation from the Journalism II teacher. It is expected that anyone moving into Journalism III is ready to accept an editorial position on the staff. Students will need to use the software program Adobe InDesign to design the school's newspaper. It will primarily deal with the production of the paper. It will also cover topics such as style, editing, caption and headline writing, and careers in journalism.



**SAT PREPARATION – 1 SEMESTER, (½ CREDIT, ¼ Math and ¼ Reading) GRADE 11**

This course is designed to be an intense review of the reading skills tested on the SAT Reading Test and the SAT Writing and Language Test: Command of Evidence, Words in Context, and Analysis in History/Social Studies and Science, Expression of Ideas, and Standard English Conventions. In addition, this course provides tips and guidelines for taking the SAT Essay, as well as grammar and vocabulary enrichment activities to help enhance the students' overall ability to effectively understand and utilize the English language when reading and writing. Throughout this course, students will be exposed to test taking strategies and will have the opportunity to utilize a variety of learning methods to attain mastery of the skills and concepts necessary for success on the SAT.

# ENGLISH LANGUAGE DEVELOPMENT (ELD)

## **ENGLISH LANGUAGE DEVELOPMENT (ELD)–INDIVIDUALIZED INSTRUCTION – GRADES 9, 10, 11, 12**

This course includes individualized instruction and activities based upon the English Language Learner's (EL's) current English proficiency. Students will be classified as Entering (Level 1), Beginning (Level 2), Developing (Level 3), Expanding (Level 4), or Bridging (Level 5). Learning activities focus on four domains: speaking, listening, reading, and writing as students work to acquire social and academic languages. The students' home languages and cultures will be utilized to enhance instruction and build natural links to classroom activities.

# FAMILY & CONSUMER SCIENCE

## **GOURMET FOODS – 1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12**

This course explores regional American Cuisines which include: New England, Kosher, Pennsylvania Dutch, Southern, Cajun, Creole, Soul Food, Northwest, Midwest, Southwest, Alaska, and Hawaii. This course includes the preparation of traditional foods from each region as well as a food competition using the southern crepe. Throughout the course the students will aid in presenting materials. The students will select a topic, prepare a presentation along with a review of the information for the class.

## **HOUSING AND DESIGN – 1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12**

This course enables students to learn the life skills of living independently. Units include: evaluating housing options, Renting, Housing styles/floor plans and purchasing a house. Students will explore their personal style in decorating their home using Elements/Principles of design, color schemes, furniture and appliances. Students will complete a final project which incorporates all units.

## **INTERMEDIATE FOODS A – 1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12**

This course enables students to learn various types of food preparation skills through lab experiences. Topics include kitchen safety and sanitation, knife skills, Mise en Place, measuring skills and cooking methods. Students will study and prepare foods within the following units: Grains (pasta, and rice), proteins (poultry, and eggs), vegetables, cookies. Within each food unit, students will use the Choose My Plate program to plate learn proper serving size, portion control, and healthy food options. Students will also learn about current food trends, specifically pertaining to dietary needs and allergy information. Students will compete in various food competitions in which they will research recipes, plan designs, and work cooperatively to create a display that will be evaluated by a panel of judges.

## **INTERMEDIATE FOODS B – 1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12**

This course is a continuation of skills learned through Intermediate Foods A. Students will use Choose My Plate as a resource and continue to demonstrate their knowledge of food preparation techniques. Students will study and prepare foods within the following units--proteins (red meats and pork); dairy; (milks and cheeses); fruits, soups and stews, quick breads versus yeast breads, and pies and pastries. Within each food unit, students will use the Choose My Plate program to plate learn proper serving, portion control, and healthy food options. Students will also learn about current food trends, specifically pertaining to dietary needs and allergy information. Students will compete in various food competitions, in which they will research recipes, plan designs, and work cooperatively to create a display that will be evaluated by a panel of judges.

## **PARENTING SKILLS – 1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12**

This course prepares students for the role of parent or working with children. Students will study the responsibilities of parenting and ways to build strong families. Also, the stages of a child's development, their characteristics at each stage, and how to provide care and guidance in parenting infants are included. Students will participate in the "Baby Think It Over" program.

# FRESHMAN SEMINAR

## **FRESHMAN SEMINAR – 1 MARKING PERIOD, ¼ CREDIT, GRADE 9**

This 45-day course is designed to transition students from middle school to the high school. The class will have various speakers present information on topics such as study skills, school service involvement, public speaking, rules and policies, and a variety of other topics. The 7 Habits of Highly Effective Teens will be a component of the course that will focus on socialization and goal attainment. Students will continue to expand their electronic career portfolios that they started in middle school in an effort to strategically select courses that will assist them in reaching their career objectives. Every 9<sup>th</sup> grade student will be enrolled in Freshman Seminar.

# MATHEMATICS

## **PRE-ALGEBRA- FULL YEAR, 1 CREDIT, GRADE 9**

This course is available to students in grade 9. Students will learn to apply properties of real numbers. Students will explore one variable equations, linear relationships, geometry concepts with algebra, and data analysis. Students will develop effective mathematical communication skills including functional representations. Students who pass this course will take Algebra 1 during the next academic year.

## **ALGEBRA 1- FULL YEAR, 1 CREDIT, GRADES 9-10**

This academic course provides a strong foundation in algebra for further study in science and mathematics. The course will cover the theoretical aspects of algebra and realistic applications to STEM. Topics include variables, linear and quadratic equations, systems of equations, rational expressions and the properties of real numbers.

## **ALGEBRA 2 – FULL YEAR, 1 CREDIT, GRADES 10, 11, 12**

This course can follow Algebra 1. Topics will include linear functions, systems of equations, quadratic functions, polynomial functions, exponential and logarithmic functions, rational expressions, and probability and statistics.

## **INFORMAL GEOMETRY – FULL YEAR, 1 CREDIT, GRADES 11, 12**

The course of study focuses on the major topics of Euclidean Geometry, including segments and angles, polygons and congruence/similarity, parallel lines and angle relationships, right triangle relationships, circles, and measurements in plane and solid figures.

## **GEOMETRY – FULL YEAR, 1 CREDIT, GRADES 9, 10, 11, 12**

This course follows Algebra I. It introduces the theorem-proof structure of mathematics. Logical deductive thinking is stressed in the writing of formal proofs and in the solution of geometric problems. Topics include parallel lines, congruent and similar triangles, and the properties of higher polygons.

## **HONORS GEOMETRY– FULL YEAR, 1 CREDIT, GRADE 9, 10**

This rigorous course is designed to challenge students as they learn skills and concepts that are part of Euclidean Geometry. These include the postulates upon which Euclid based his Geometry, methods of conjecture, and the use of deductive proof to establish theorems. The geometry of triangles, angle relationships, parallel and perpendicular lines, coordinate geometry, transformations, triangle centers, congruence and similarity, right triangle trigonometry, circles, and measurement including areas and volume relationships. Material will be covered more in depth and at a faster pace than in the Geometry.

## **ALGEBRA 2 & TRIGONOMETRY – FULL YEAR, 1 CREDIT, GRADES 10, 11, 12**

A rigorous academic course for college bound students. The topics studied in Algebra will be extended and the study of logarithmic and trigonometric functions, matrices and, complex numbers, are begun.

### **HONORS ALGEBRA 2 AND TRIGONOMETRY – FULL YEAR, 1 CREDIT, GRADE 10**

This rigorous course is designed to continue the study and application of algebraic principles from Algebra 1 and extended in Geometry. Students will be challenged with abstract problems and applications as they study and apply linear and quadratic functions, logarithmic functions, circular trigonometry and trigonometric relationships, matrices, and functions involving real and complex solutions. Students will learn to model real world situations using the Mathematics studied in the course. Material will be covered more in depth and at a faster pace than in the Algebra 2 Course.

### **MATHEMATICAL MODELING** – FULL YEAR, 1 CREDIT, GRADE 11, 12

This class is a collection of mathematical situations drawn from real life. It is a class that will foster collaborating with classmates, working as a team member and drawing conclusions from data. Appropriate technology through the use of the graphing calculator will be accessed to model and analyze data. Students will explore problem solving skills, linear function models, quadratic function models, exponential function models, geometric models, statistical and graphical models, financial models, and probability models.

### **INTRODUCTORY STATISTICS** – FULL YEAR, 1 CREDIT, GRADES 11, 12

This course is designed to introduce students to the concepts of statistics as they apply to many other fields of study. Major topics will include elementary data analysis with both graphical and numerical approaches; the design of experiments, studies, and surveys, probability, and methods of inference.

### **ADVANCED PLACEMENT STATISTICS** – FULL YEAR, 1 CREDIT, GRADES 10, 11, 12

Advanced Placement Statistics is a rigorous course in descriptive and inferential statistics. Major topics include analysis and organization of data patterns and outliers, design of studies, the study of randomness and important distributions, and statistical inference techniques. All students completing the course are expected to take the advanced placement examination. Students may be able to earn college credits with an appropriate score on the AP Exam.

### **PRE-CALCULUS** – FULL YEAR, 1 CREDIT, GRADES 11, 12

This is an academically demanding course designed to prepare students for college level calculus. This course involves the study of: linear, quadratic, polynomial, rational, exponential, logarithmic, and trigonometric functions, conic section, complex numbers, sequences and series, and graphing techniques as experienced in real-world problem solving. This course is taken after Algebra 2 & Trigonometry.

### **HONORS PRE-CALCULUS** – FULL YEAR, 1 CREDIT, GRADE 11

Honors Pre-Calculus covers more material, more deeply, than regular sections of Pre-Calculus with greater emphasis on problem solving and critical reasoning. In addition, a more abstract approach is followed emphasizing proof in the non-routine solving of problems. An important goal of the course is the preparation of the student for success in Advanced Placement Calculus coursework. This course is designed for highly motivated students of exceptional ability who have a strong interest in mathematics.

### **CALCULUS** – FULL YEAR, 1 CREDIT, GRADE 12

An applications-oriented introduction to limits, derivatives, differential equations, and integrals, for students with a solid foundation in functions, logarithms, trigonometry, sequences and series, and analytic geometry.

### **ADVANCED PLACEMENT CALCULUS (AB) – FULL YEAR, 1 CREDIT, GRADE 12**

This course follows the curriculum set by the College Board for the advanced placement Calculus AB exam. Topics covered include limits, continuity, derivatives, applications of derivatives, integrals, and applications of integrals. All students completing the course are expected to take the advanced placement examination. Students may be able to earn college credits with an appropriate score on the AP Exam.

### **ADVANCED PLACEMENT CALCULUS (BC) – FULL YEAR, 1 CREDIT, GRADE 12**

This course follows the curriculum set by the College Board for the advanced placement Calculus BC exam. This course covers all of the topics of Advanced Placement Calculus AB as well as analysis of parametric, polar, and vector functions, polynomial approximations and series. All students completing the course are expected to take the advanced placement examination. Students may be able to earn college credits with an appropriate score on the AP Exam.

### **ADVANCED MATHEMATICAL TOPICS: ANALYSIS – 1 SEMESTER, ½ CREDIT, GRADE 12**

Advanced Mathematical Topics (semester 1) is designed for advanced mathematics students to be taken in conjunction with Advanced Placement Calculus. This course focuses on foundations of mathematics, including logic, methods of mathematical proof, writing and critiquing of proofs, number theory, set theory (including theory of infinite sets), and paradoxes. The course will also emphasize development of student's mathematical problem solving skills in a variety of areas including algebra, geometry, probability, logic, and word problems in order to be successful in mathematics contests at the local, state, and national levels. Furthermore, the course will stress students' proper use of terminology and precise language both verbally and in writing.

### **ADVANCED MATHEMATICAL TOPICS: DISCRETE – 1 SEMESTER, ½ CREDIT, GRADE 12**

Advanced Mathematical Topics (semester 2) is a course for seniors to be taken in conjunction with Advanced Placement Calculus which focuses on branches and applications of advanced mathematics such as calculus, combinatorics, probability, matrices, linear programming, cryptography, graph theory, and topology. Also, the use of technology, such as the TI-84 and TI-89 graphing calculators, internet websites, and Derive software, will be emphasized. Note: Advanced Mathematical Topics (Semester 1) is not a prerequisite for this course.

### **SAT PREPARATION – 1 SEMESTER, (½ CREDIT, ¼ Math and ¼ Reading) GRADE 11**

This course is designed to be an intense review of the four areas of mathematical questioning found on the new SAT mathematics sections. Students will review the key concepts found in their Algebra 1, Algebra 2 and Geometry classes. Therefore, it is highly suggested that the student has completed the Algebra 1, Algebra 2 and Geometry sequence. Students will be challenged with real world problem solving, critical thinking and communication in the area of mathematics. Students will study various properties and applications in the following areas: numbers and operations, Algebra, Geometry and measurement, Data analysis, statistics and probability.

Students will have the opportunity to use a variety of learning methods to attain mastery of the skills and concepts necessary for success. This mastery will be demonstrated through explicit workbook applications, collaboration with peers, guided inquiry, and direct instruction. Technology is integrated whenever appropriate to support and challenge the learning of the students. Such technological instruction will be through the use of graphing calculators and/or internet-based learning sites.

### **COMPUTER PROGRAMMING, I – 1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12**

This course is designed to introduce students to the process of computer programming. Students will learn fundamental concepts of computer programming and the programming language Microsoft Visual Basic. The students will learn how to write programs in order to solve a variety of interesting and useful problems. Students who do well in mathematics and have a possible interest in pursuing careers in any math or science related area should consider taking this course. By the end of the course, students will have acquired enough knowledge and skill to plan and develop programs for their own use. This course also provides the foundation for further study in computer programming.

### **COMPUTER PROGRAMMING II –1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12**

The major emphasis in Computer Programming II is the study of object-oriented design and implementation using JAVA. This course will allow students to become familiar with the theory and application of object-oriented programming (OOP) techniques and will focus on providing students with good programming practices. The course will introduce students to OOP fundamentals such as simple language basics, data representation and storage control structures, classes and their methods, objects, and arrays. Students will learn to use and implement commonly used algorithms and data structures to solve problems.

### **ADVANCED PLACEMENT COMPUTER SCIENCE PRINCIPLES – FULL YEAR, 1 CREDIT, GRADES 9, 10, 11, 12**

This course will be offered to enhance students' 21<sup>st</sup> century skills and will emphasize the crucial impact that computing has on people and society. The course will focus on project-based learning to enhance the skills of communication, collaboration, creativity and critical thinking. Students will explore creating algorithms, collecting data and analyzing information for global impact. In some circumstances, a freshman student who passed Algebra in the 8<sup>th</sup> grade may be eligible for this course.

### **ADVANCED PLACEMENT COMPUTER SCIENCE – FULL YEAR, 1 CREDIT, GRADES 10, 11, 12**

This course will cover the topics outlined in the course description for advanced placement Computer Science A course. Upon completion of this course, students will be prepared to take the AP Computer Science A exam. This course uses the Java skills gained in Computer Programming II and expands on key concepts of control structures, classes, and objects. Students will learn how to select appropriate algorithms (sorting and searching algorithms) and data structures to solve rigorous problems. This course also includes a structured lab component comprised of a minimum of 20 hours of hands-on lab experiences (Magpie Lab, Elevens Lab, and Picture Lab).



# MULTIDISCIPLINARY

## **AP SEMINAR – FULL YEAR, 1 CREDIT, GRADE 11**

AP Seminar is a multidisciplinary course that explores the intricacies of real-world academic topics by analyzing the varied perspectives involved. Students are challenged to critically think about these problems in order to establish a solution. An inquiry framework is used and the students practice reading and analyzing articles, research studies, and various texts; listening to and viewing speeches, broadcasts; and experiencing artistic works and performances. Students learn to synthesize information from multiple sources, as well as develop and deliver a credible defense both individually and as a part of a team. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision in order to craft and communicate evidence-based arguments.

# MUSIC

## **JAZZ BAND – 1 SEMESTER, ½ CREDIT, OR 2 SEMESTERS, 1 CREDIT, GRADES 10, 11, 12.**

This course provides students with the opportunity to perform various styles of music. A level of proficiency beyond basic musicianship is required. Registration for this course is by audition and director recommendation only. Jazz Band members are required to perform at school and community events.

## **MUSIC PERFORMANCE 1 AND 2 – 1 SEMESTER, ½ CREDIT OR 2 SEMESTERS, 1 CREDIT, GRADES 9, 10, 11, 12**

The Delaware Valley High School Concert Band, Concert Choir and Orchestra rehearse every day during the same period, following a six-day schedule. Students can be in more than one performing group or all three, with rehearsal time being shared. Each group has a full rehearsal twice during the six-day schedule. Grades are earned on the basis of daily rehearsal attendance, effort and attitude, and attendance at performances.

**CONCERT CHOIR** – This course is offered for students who have demonstrated a proficiency in singing, who enjoy singing, and who are interested in developing their talent. The Concert Choir performs music of all styles, including works from all the serious music history periods. Preparation of repertoire is expected both in and out of class. Registration for this course is by audition and director recommendation only. Attendance at all Concert Choir performances is required.

**CONCERT BAND** – This course provides students with the opportunity to perform various styles of music while progressing on their given instrument. Students must have proficiency on a wind or percussion instrument. Diligent preparation of repertoire is expected both in and out of class. Band members are required to perform at school and community events.

**ORCHESTRA** – This course is a performance group for high school students who are currently playing the violin, viola, cello, or bass in the orchestra program. Director recommendation is required for enrollment. Preparation of repertoire is expected both in and out of class. Orchestra members are required to perform at school and community events.

## **MUSIC THEORY – 1 SEMESTER, ½ CREDIT, OR 2 SEMESTERS, 1 CREDIT, GRADES 10, 11, 12.**

This course is designed for students who wish to gain a better understanding of music and serves as preparation for AP Music Theory. Students will learn how to read, write, analyze and listen to music through the study of scales, chords, melody, and ear training. Membership in music ensembles is encouraged while taking this course, but is not required.

### **ADVANCED PLACEMENT MUSIC THEORY – FULL YEAR, 1 CREDIT, GRADES 11, 12**

Advanced Placement Music Theory is a college level course that integrates aspects of melody, harmony, texture, rhythm, form, musical analysis, musical composition, and, to some extent, history and style. Musicianship skills such as dictation and other listening skills, sight-singing, and keyboard harmony are also considered an important part of the class. The student's ability to read and write musical notation is fundamental to the course and it is assumed that the student is involved in one of the school's music performance organizations. Successful completion of Music Theory is recommended for prospective students. All students completing the course are expected to take the advanced placement examination. Students may be able to earn college credits with an appropriate score on the AP Exam.

### **GUITAR- LEVEL 1 – 1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12**

This course is designed to introduce students to playing the guitar at the beginner level. Students will learn proper playing techniques and how to read music in standard notation written for guitar, such as chord diagrams, melody, and bass lines. Small ensembles will be formed within each class, requiring teamwork and musical independence. Students will learn how to arrange songs for class performances, and will be required to play and sing in front of an audience of their peers. Individual students are tested on technical skills through numerous skill proficiencies, as well as written tests. All equipment and materials, including guitars, will be provided. There are no prerequisites for this course.

### **GUITAR- LEVEL 2 – 1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12**

This course is a continuation of the material learning in Guitar 1. Students will dive deeper into the basics of guitar playing, such as barre chords, scales, and transposition. Reading music in standard notation will be reinforced, as well as an introduction into reading tablature. Students will be required to play and sing in small ensembles for in class and public performances. Individual students are tested on technical skills through numerous skill proficiencies, as well as written tests. All equipment and materials, including guitars, will be provided. In order for a recommendation for this course, the student must either have successfully completed Guitar 1, or auditioned with the guitar teacher consisting of identifying concepts mastered in Guitar 1, and performing melodic and bass lines, chords, and sight-reading at the beginning level.

# PHYSICAL EDUCATION

## **PHYSICAL EDUCATION AND HEALTH EDUCATION – 1 SEMESTER ½ CREDIT, GRADES 9, 10, 11, 12**

This is a required course for all grade levels. It will focus on personal fitness evaluation and development of personal wellness through the incorporation of team, individual, dual, and lifetime sports. Students will be introduced to a variety of activities to maintain and enhance fitness levels. Health education will be incorporated into grades 11 and 12.

## **HEALTH 9 – 1 MARKING PERIOD; ¼ CREDIT**

This is a half-semester class required for all freshmen. It covers the topics of human sexuality, drug and alcohol prevention education, and violence prevention.

## **DRIVER EDUCATION THEORY– 1 MARKING PERIOD; ¼ CREDIT, GRADE 10**

All sophomores are required to take this class. This class will give background information on permit, license, insurance, and driving laws in Pennsylvania. It will also provide preliminary knowledge on the techniques of driving.

## **DRIVER EDUCATION – BEHIND THE WHEEL - GRADES 11, 12**

Juniors and seniors may opt to take the behind the wheel training, which consists of at least 6 hours of concentrated on-the-road instruction. A valid Pennsylvania learner's permit or license and passing of Driver Education Theory are required for on-the-road instruction.

## **ATHLETIC TRAINING 1 – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

Course is designed for students interested in fields such as athletic training, physical therapy, fitness, and coaching. This course will cover the basic fundamentals of athletic training.

## **ATHLETIC TRAINING 2 – 1 SEMESTER, ½ CREDIT, GRADES 11, 12**

It is strongly recommended that students have taken Athletic Training 1, and enrolled in or have passed Anatomy and Physiology. This course will cover more in-depth components of athletic training. Lab time after school is mandatory; times will be coordinated with the school's athletic trainer

## **LEADERSHIP AND ADVENTURE EDUCATION – 1 SEMESTER, ½ CREDIT, GRADES 11, 12**

This is a one semester elective physical education class that does not fulfill the physical education credits. Through a carefully planned curriculum of group and individual initiatives, the students will progress through an experientially based self-discovery program that emphasizes interpersonal relationships and personal growth. This course will have an emphasis on "The 7 Habits of Highly Effective Teens" and application to daily life. The course will also emphasize participation, and the students are encouraged to extend their limits both physically and emotionally. Students are required to participate in all group activities but may decline to attempt individual challenges that they feel are beyond their personal limits.

**OFFICIATING TEAM AND INDIVIDUAL SPORTS – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

This is a one semester elective physical education class that does not fulfill physical education credits. This course is designed for students who have interest in officiating high school and youth sports. Students will be introduced to the rules and techniques of officiating team sports. Students will also learn important characteristics of becoming an official. In addition to learning the rules and mechanics of officiating, students will have the opportunity to demonstrate these learned skills. Students enrolled in this course will be required to officiate a variety of team sports within other physical education classes offered at Delaware Valley High School. Students will also be given contact information to assist them in finding officiating jobs within the community.

**PHYSICAL FITNESS AND TRAINING – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

This is a one semester elective physical education class that does not fulfill the physical education credits. This course is a combination of classroom and activity-based learning activities with a focus on proper nutrition and the mastery of skills and concepts necessary for students to become accomplished monitors of their personal lifetime fitness. Through participation, students learn to compare the fitness benefits in a variety of training techniques. Students should expect to participate in vigorous workouts daily (i.e. strength training, cardiovascular, CrossFit, yoga etc.) and analyze the training effects of these workouts. Students will become proficient in the use of a variety of assessments, measurement devices, exercise equipment, and web and community resources. Assigned reading and writing assignments, which include activity journals and portfolios, broaden the physical education experience and contribute to the literacy of students.

# READING

## **FOUNDATIONS OF ENGLISH 9/FOUNDATIONS OF READING 9 – FULL YEAR, 2 PERIODS, 2 CREDITS, GRADE 9 (1 English Credit and 1 Reading Credit)**

This course is designed for students in 9<sup>th</sup> grade whose reading achievement is below the proficient level. The goal is to address gaps in decoding, encoding, fluency, vocabulary, and comprehension.

## **FOUNDATIONS OF ENGLISH 10/FOUNDATIONS OF READING 10 – FULL YEAR, 2 PERIODS, 2 CREDITS, GRADE 10 (1 English Credit and 1 Reading Credit)**

This course is designed for students in 10<sup>th</sup> grade whose reading achievement is below the proficient level. The goal is to address gaps in decoding, encoding, fluency, vocabulary, and comprehension.

## **ELECTIVES:**

### **CRITICAL READING 11 – 1 SEMESTER, ½ CREDIT, GRADE 11**

This course will focus on the PA Core Standards. It is designed to provide students with strategies to improve reading and writing skills. It will be required for any student in English 11 who meets a specific set of criteria. Developmental reading instruction will be provided throughout the course.

### **LITERACY 1– 1 SEMESTER, ½ CREDIT, GRADE 10**

This course will focus on the PA Core Standards. It is designed to provide students with strategies to improve reading and writing skills. It will be required for any student in English 9 who meets a specific set of criteria. Developmental reading instruction will be provided throughout the course.

### **LITERACY 2– 1 SEMESTER, ½ CREDIT, GRADE 10**

This course will focus on the PA Core Standards. It is designed to provide students with strategies to improve reading and writing skills. It will be required for any student in English 10 who meets a specific set of criteria. Developmental reading instruction will be provided throughout the course.

# SCIENCE

## **CONCEPTS OF SCIENCE 9 – FULL YEAR, 1 CREDIT, GRADE 9**

This course, designed for students in need of remediation, is a skills-based class which will allow students to develop the basic skills necessary for success. In this course, students will learn about the Earth and its environment. Topics will include: ecology, earth's resources, population and urbanization, as well as global climate change. Students will learn about the economics of going green, environmental health and how policy and environmental legislation evolved over the course of the last several decades. Within the Ecology Unit, students will study different biomes, environmental communities, and analyze conservation practices. Students will learn the carrying capacity of the Earth and how cities plan for growth and sprawl using GIS Systems. Droughts and the effect on crops will be analyzed in detail and alternative options, such as genetically modified crops, will be debated. Pollution of waterways and Earth's atmosphere, trash and waste management practices, will be researched and studied, along with renewable and nonrenewable energy sources. This course will begin to prepare students for the Keystone Biology Exam, stressing writing with current events to develop necessary critical thinking skills in a rapidly evolving society.

## **SCIENCE 9 – FULL YEAR, 1 CREDIT, GRADE 9**

In this course students will learn about the Earth and its environment. Topics will include: ecology, earth's resources, population and urbanization, as well as global climate change. Students will learn about the economics of going green, environmental health and how policy and environmental legislation has evolved. Within the Ecology Unit, students will study different biomes, environmental communities, and analyze conservation practices. Students will learn the carrying capacity of the Earth and how cities plan for growth and sprawl using GIS systems. Droughts and the effect on crops will be analyzed in detail and alternative options, such as genetically modified crops, will be debated. Pollution of waterways and Earth's atmosphere, trash and waste management practices, will be researched and studied, along with renewable and nonrenewable energy sources. This course will begin to prepare students for the Keystone Biology Exam, stressing writing with current events to develop necessary critical thinking skills in a rapidly evolving society.

## **CONCEPTS OF BIOLOGY – FULL YEAR, 1 CREDIT, GRADE 10**

This course provides an overview of the essential topics in biology that include: ecological principles, biochemistry, cellular differentiation, structure, and function, energy transfer and chemical reactions, reproduction and inheritance, including DNA and Mendelian genetics, evolutionary principles, and the classification of living things. Each unit underscores the role of biology in the life of the student and will attempt to present relevance to present-day scientific issues in society. Each unit will focus on significant themes in biology that stress the study of life, the continuity of life, the diversity of life, and the way in which living organisms are influenced by their environment. Students with diverse learning styles will have the opportunity to use a variety of learning methods to attain mastery of the skills and concepts necessary for success. These methodologies include direct instruction, laboratory activities and/or demonstrations, hands-on creative projects, interaction with various texts, collaboration with peers, guided inquiry, written assignments, and multimedia presentations. Students are required to take the Keystone Biology exam at the completion of the course.

### **BIOLOGY – FULL YEAR, 1 CREDIT, GRADE 10**

This course familiarizes students with biological including ecological principles, biochemistry, cellular differentiation, structure, and function, energy transfer and chemical reactions, reproduction and inheritance, including DNA and Mendelian genetics, evolutionary principles, and the classification of living things. Each unit underscores the role of biology in the life of the student and will attempt to present relevance to present-day scientific issues in society. Each unit will focus on significant themes in biology that stress the study of life, the continuity of life, the diversity of life, and the way in which living organisms are influence by their environment. Laboratory classes are designed to stimulate student interest and encourage problem solving and discovery. Students are required to take the Keystone Biology exam at the completion of the course.

### **HONORS BIOLOGY– FULL YEAR, 1 CREDIT, GRADE 9, 10**

This course investigates the details of biological topics including ecological principles, biochemistry, cellular differentiation, structure, and function, energy transfer and chemical reactions, reproduction and inheritance, including DNA and Mendelian genetics, evolutionary principles, and the classification of living things. Each until will focus on significant themes in biology that stress the study of life, the continuity of life, the diversity of life, and the way in which living organisms are influenced by their environment. Laboratory classes are designed to promote student problem-solving and deep analytical skills. Significantly more material is covered at a faster pace than in regular sections of Biology. Students are required to take the Keystone Biology exam at the completion of the course.

### **CHEMISTRY – FULL YEAR, 1 CREDIT, GRADES 10, 11, 12**

This course is designed to familiarize students with a theoretical and practical study of the chemical and physical properties of matter. Laboratory and mathematical techniques are emphasized while dealing with measurement and significant digits, chemical formulas and equations, the mole concept, acids and bases, atomic structure, electron configurations, and the periodic table. Other topics discussed include ionic and covalent bonding, the gas laws, PH, and molarity. Safety is emphasized before each laboratory begins and formal lab reports are required to be written at the conclusion of the activity. This course is highly recommended for any academic student pursuing a college education.

### **HONORS CHEMISTRY– FULL YEAR, 1 CREDIT, GRADE 10**

This course is designed for advanced level tenth grade students. This course will investigate the principles and applications of chemistry. The topics include structure and properties of matter, stoichiometry of chemical reactions, thermodynamics, kinetics and chemical equilibrium. This course is designed to prepare the students for the Advanced Placement course in Chemistry. Significantly more material is covered at a faster pace than in the regular sections of chemistry.

### **ANATOMY & PHYSIOLOGY – FULL YEAR, 1 CREDIT, GRADES 10, 11, 12**

This advanced biological science course is designed to elaborate on concepts learned during the human component of Biology. An overview of the 11 major organ systems will give students a fundamental basis for specific structure and function of the organs involved with each organ system. Related studies in biochemistry, cell biology, histology, biotechnology, bioethics, and pathology will also be addressed.



### **CITIZEN SCIENTIST- FULL YEAR, 1 CREDIT, GRADES 11, 12**

This is an interdisciplinary science course that focuses on current events relating to specific issues in the world as well as the events that occur within the biome of the temperate deciduous forest, especially in Northeastern Pennsylvania. Relevant current events will be examined throughout the course on a local, state, national, and global level to foster science literacy in society. The biodiversity and seasonal changes of the temperate deciduous forest will be studied to understand cycles in nature and energy as they relate to current scientific issues and policies. Students will examine ethics, worldview, values, risk, and statistics; changes in local ecology and the temperate deciduous forest biome throughout all four seasons; food and agricultural issues; consumerism, waste and trash production and management; human population issues; citizen science exploration projects; climate change; pollution and human health topics, evolution, and reproductive technology; water issues; current scientific issues; and citizen science in the world. This course is designed to prepare students to be more scientifically literate regarding issues with science and society.

### **APPLICATIONS OF PHYSICAL SCIENCE- FULL YEAR, 1 CREDIT, GRADES 11, 12**

This course is meant to provide connections between physical science concepts and Delaware Valley's Career and Technical Education Programs (CTE). The course will include a mix of discovery learning, laboratory inquiry, and direct instruction. Main topics in this course include periodic table, matter, chemical composition, atomic structure, chemistry of batteries, pH, gasses and pressure, introductory stoichiometry, Newton's Laws, pressure, work measurement, electricity, force and friction, and thermodynamics. Students will complete labs to develop their understanding of these concepts. They will complete lab reports to communicate their methods and conclusions.

### **PHYSICS – FULL YEAR, 1 CREDIT, GRADES 11, 12**

This course is structured to investigate the forces between matter and the energy possessed by matter on a theoretical and mathematical basis. Emphasis is on mathematical interpretations in such areas as rectilinear and curvilinear motion, projectile motion, kinetic and potential energy, forces, light, waves, and electromagnetism. Laboratory experiments provide practical applications of established physical laws and laboratory calculations are implemented via computer-assisted instruction.

### **ASTRONOMY– 1 SEMESTER, ½ CREDIT, GRADES 10,11,12**

This course will provide an introductory study of the concepts of modern astronomy, the origin and history of the Universe, and the formation of the Earth and the solar system. Students will compare the Earth's properties with those of the other planets and explore how the heavens have influenced human thought and action. In addition, students will compare the Sun's properties with those of the other stars and explore how the laws of physics govern the structure of the universe. Students will be exposed to activities related to charting the heavens, the Copernican revolution, spectroscopy, telescopes, our planetary system, solar system debris, planetary systems beyond our own, stars and stellar evolution, galaxies: the building blocks of the universe, and cosmology: the origin and fate of the universe. This course will occasionally require the use of Algebra II.

### **GEOLOGY– 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

This course will provide an introductory study of the origin and evolution of the Earth. Emphasis is placed on examination of the materials, surface features, structures and internal characteristics of the Earth, and on the geological processes that caused them. Students will be exposed to activities related to mapping, mineral/rock identification, plate tectonics, volcanism, earthquakes, crustal deformation, mountain building, erosional agents, and Earth's evolution through geologic time.

### **FORENSIC SCIENCE A – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

This advanced college based science course will provide academic theories and extensive lab experiences about the application of science to criminal investigation and the role of science in the criminal justice system. A semester project is required in addition to a capstone project involving an analysis of a crime scene. Semester topics include divisions of Forensic Science, Testimonial Evidence, Forensic Autopsy, Trace Evidence, Forensic Biology, Physical Evidence, Processing a crime scene and Document Analysis. A strong science background is essential. Forensic Science B is not required as a follow-up to this course.

### **FORENSIC SCIENCE B – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

This advanced college based science course will provide academic theories and extensive lab experiences about the application of science to criminal investigation and the role of science in the criminal justice system. A semester project is required in addition to a capstone project involving an analysis of a crime scene. Semester topics include Forensic Psychology, Fingerprinting, Toxicology, Trace Evidence, Digital Forensic Science, DNA and Serology. A strong science background is essential. Since the basic concepts that were mastered in Forensic Science A will be utilized throughout Forensic Science B, it is strongly encouraged to take Forensic Science A before taking this course, however, it is not required for a precursor for this course.

### **ADVANCED PLACEMENT BIOLOGY – FULL YEAR, 1 CREDIT, GRADES 10,11, 12**

The Advanced Placement Biology course is designed to be the equivalent of a college introductory Biology course usually taken by biology majors during their first year of college. The Advanced Placement Biology course is designed to integrate biological concepts such as molecular genetics, population biology, and cellular biology with chemical and mathematical skills such as biochemical theory and statistics. Students must consistently do extensive work outside the classroom. They will be expected to comprehend a college level textbook, complete analytical laboratory work using higher mathematical skills and cover selected topics in biology independently. Having completed Honors Biology, Honors Chemistry and Pre-calculus will facilitate success in this course. It is also suggested that students should be concurrently enrolled in Anatomy and Physiology or they should have already taken it. All students completing the course are expected to take the advanced placement examination. Students may be able to earn college credits with an appropriate score on the AP Exam.

### **ADVANCED PLACEMENT CHEMISTRY – FULL YEAR, 1 CREDIT, GRADES 11, 12**

The Advanced Placement Chemistry course is designed to prepare students to take the Advanced Placement Chemistry exam of the College Board. The topics covered are mass relationships, atomic structure, acid/base equilibrium, molecular equilibrium, thermodynamics, rates of reaction, electrochemistry, and bonding properties. The required labs are the activities commonly tested on the exam. Students are required to learn to write chemical equations based on the format required by the exam. Students are expected to comprehend a college level textbook and work independently on assignments. Having completed Honors Chemistry and Honors Algebra 2 and Trigonometry will facilitate success in the course. This course is highly recommended to any student who is planning to pursue a science or engineering degree in college. All students completing the course are expected to take the advanced placement examination. Students may be able to earn college credits with an appropriate score on the AP Exam.

### **ADVANCED PLACEMENT ENVIRONMENTAL SCIENCE – FULL YEAR, 1 CREDIT, GRADES 11, 12**

The Advanced Placement Environmental Science course is offered to students interested in understanding the planet and the dynamics and complexities that impact its existence. This course would benefit any student interested in engineering or science, as well as those interested in environmental protection from a social or political responsibility. Major topics of study in this course include earth systems and resources, the living world, population, land and water use, energy resources and consumption, pollution, and global change. A strong laboratory component is present during study and will allow students to explore concepts that are introduced to them in the classroom. Students will have the opportunity to complete field work on the DV Campus and may attend several field trips that will allow them to gain insight and experience that cannot be offered through traditional classroom study. All students completing the course are expected to take the advanced placement examination. Students may be able to earn college credits with an appropriate score on the AP Exam.

### **ADVANCED PLACEMENT PHYSICS 1: ALGEBRA BASED – FULL YEAR, 1 CREDIT, GRADES 11, 12**

AP Physics 1 is an algebra-based, introductory college-level physics course that explores topics such as kinematics, forces, linear and rotational motion, Newton's Laws of Motion and Universal Gravitation, rotational motion, work, energy, and power; mechanical waves and sound; and introductory; simple electrical circuits. Through inquiry based learning students will develop scientific critical thinking and reasoning skills. Students should have completed Geometry and be concurrently taking Algebra II or an equivalent based course. Although the Physics 1 course includes basic use of trigonometric functions, this understanding can be gained either in a concurrent math course or in the AP Physics 1 course itself. No prior work in physics is necessary. All students completing the course are expected to take the advanced placement examination. Students may be able to earn college credit with an appropriate score on the AP Exam.

### **ADVANCED PLACEMENT PHYSICS-C – FULL YEAR, 1 CREDIT, GRADE 12**

Advanced Placement Physics is a second year physics course designed to prepare students for the Advanced Placement Physics C exams. The course will benefit students interested in majoring in engineering or the physical sciences in college. A thorough knowledge of the material covered in AP Physics 1 will be assumed, and advanced mathematics, including calculus, will be used regularly. Selected topics from mechanics, and electricity and magnetism will be studied. All students completing the course are expected to take the advanced placement examinations. Students may be able to earn college credits with an appropriate score on the AP Exam.

### **SENIOR SCIENCE RESEARCH SEMINAR – FULL YEAR, 1 CREDIT, GRADE 12**

This elective is designed for students who are planning on majoring in science in college. Students will design and conduct a research project. They will be responsible for selecting their own topic during the year and/or previous year. Projects may require students to begin work during the summer between their junior and senior year. In this course, they will define their project through research and collect data. They will analyze and explain results with help from department mentors and/or scientists. Guest speakers, videos, field trips, selected scientific papers, and discussions will be part of the course. At the end of the year, each student will present a formal scientific paper before an audience that may include scientists, engineers, parents, teachers, and administrators.

# SOCIAL STUDIES

## **CONCEPTS OF AMERICAN STUDIES – FULL YEAR, 1 CREDIT, GRADE 9**

This course is designed to challenge concepts-level high school students to learn and apply the lessons of American History from the United States Civil War through modern times. The learning focus will be on major periods, leaders, and developmental stages in American History. The curriculum has been designed to utilize available technology and cross-curricular activities. This course has been aligned with the Pennsylvania State Standards and current DVSD scope and sequence.

## **AMERICAN STUDIES – FULL YEAR, 1 CREDIT, GRADE 9**

Throughout this course, students will interpret political, social, geographic, economic, and cultural events in American History. The time period will extend from the aftermath of the Civil War to modern times. Students will be required to perform writing exercises including essays and historical reports. Students will use informational text to create projects and informative posters using multimedia tools. Students will work cooperatively, interpret and analyze historic documents, primary, and secondary sources. This includes written texts, film, and political cartoons. Students will make presentations to the class, and analyze cause/effect relationships relative to significant events in United States history from 1865-present.

## **COMBO AMERICAN STUDIES– FULL YEAR; 1 CREDIT ENGLISH/1 CREDIT SOCIAL STUDIES, GRADE 9**

This team-taught, interdisciplinary course is designed to provide students with a better understanding and command of writing, vocabulary, grammar, research, literature, debate, and presentation as they relate to crucial events in American history from Reconstruction through the present day. The course focuses on Pennsylvania Core standards and Keystone Eligible Content. Throughout this course, students will read various pieces of literature and nonfiction, related to American history, and incorporate them into writing assignments, including constructed-responses and informative, argumentative, and analytical essays. A brief review of basic grammar concepts will occur, with additional units on grammar, usage, and mechanics to follow. In addition, students will debate their peers and create original works for presentation. This course is designed for students who enjoy public speaking. Students must also work well in groups. There is a community service component to this course. A research paper is a course requirement. Eighth grade English and Social Studies teachers will recommend students for this program. This Course must be taken in conjunction with Combo American Studies.

## **HONORS AMERICAN STUDIES – FULL YEAR, 1 CREDIT, GRADE 9**

The Advanced American Studies course will examine trends, leadership, and significance of events that occurred in Post-Civil War America. Course units will include: The African-American Experience, Immigration and Migration, The American Economy, Progressivism and reform, The Origins of American Foreign Policy, America's Involvement in World War, and America's Role as a World Power. In order to prepare students for Advanced Placement level courses, this class will develop, reading, writing, critical thinking and reasoning skills. In addition, the high-achieving academic students will utilize the integration of technology, and further develop research, collaboration, and presentation skills.

### **CONCEPTS OF WORLD STUDIES – FULL YEAR, 1 CREDIT, GRADE 10**

This course is a skills-based class which will allow students to develop the basic skills necessary for success by moving more slowly and including more guided practice. Forty percent of this course will focus on developments in Europe since 1450, and for the remainder of the year students will study various regions of the world, including Asia, Africa and the Middle East. Students will research the effects of European imperialism on these regions, the eventual independence of countries in the region, and current problems facing specific countries in the area. Each unit is thematically organized to include the region's governmental structure, historical heritage, religions, economy and geographic features.

### **WORLD STUDIES – FULL YEAR, 1 CREDIT, GRADE 10**

This course is designed to provide students with concepts, content, and skills necessary to gain a broad understanding of the various socio-political, economic, cultural, and social networks in and amongst European, African, Asian and American civilizations. Students will study in detail the rise of humanity from the Neolithic Era to present day post-industrial societies. Particular attention will be given to the cyclical patterns of the rise, impact, and fall of global economic, military, religious, and political empires. This will necessitate students' learning and applying those lessons in order to become responsible, productive citizens in the modern age of globalization for the benefit of future generations. This course will provide student with a greater understanding of how literature and history are interwoven to express the cultural heritage of various groups living in particular regions.

This course has been constructed to meet state standards. Each unit is chronologically and thematically organized to include the interconnectedness of regions' geographic features, cultural and historical heritage, economic and governmental systems, and religious/spiritual backgrounds and practices to others. Each unit will be taught in one of three ways: chronologically, thematically, and with an emphasis on cognitive analytical and evaluation skill building. A strong emphasis is placed on communication skills and cooperative learning activities.

### **COMBO WORLD STUDIES – FULL YEAR; 1 CREDIT ENGLISH/1 CREDIT SOCIAL STUDIES, GRADE 10**

This standards-based course combines English 10, which incorporates the analysis of American and world literature, and World Studies, which explores the cultures of Europe, India, China, Japan, Africa, Middle East, Southeast Asia and Latin America. English 10 and World Studies is a team-taught course that provides the student with a greater understanding of how literature and history are interwoven to express the cultural heritage of the ethnic groups living in specific regions of the world. Both objective and subjective assessments are based on Pennsylvania Core Standards and Keystone Eligible Content and focus on the skills necessary to achieve proficiency on the Pennsylvania Keystone Literature Exam and the SAT. Critical reading skills, especially those close and analytical in nature are evaluated with objective standards-based assessments and constructed-response questions. Improvement of students' writing with careful stress on developing elevated diction and more complex, refined syntax is also addressed within the realm of the curriculum, and students' writing, which includes constructed-responses and informative, argumentative and analytical essays, will be scored based on their command of the English language with an emphasis on modeled, studied writing styles, as well as personal writing style. A strong emphasis is placed on oral and written communication skills and cooperative learning activities. Students must also work well in groups. This course involves a community service component. The ninth grade English and Social Studies teachers will recommend students for this course. Summer reading will be assigned for this course. A research paper is a course requirement. This course must be taught in conjunction with Combo English 10.

### **ADVANCED PLACEMENT WORLD HISTORY – FULL YEAR, 1 CREDIT, GRADES 10, 11**

This course is designed for students who have met the necessary academic requirements and received the proper recommendations to take this college level social studies class. It is recommended for students who have special interests in history, politics, government, international relations, and plan on majoring in related areas in a nationally recognized four-year university. Students will study in detail the rise of humanity from the Neolithic Era to present day post-industrial societies.

Particular attention will be given to the comparative nature of history and broad thematic changes and continuities that are present from one major era to the next. Completion of this course should not only stress success on a standardized cumulative AP tests, but should help apply those lessons in order to become responsible, productive citizens in this modern age of globalization for the benefit of future generations. This course has been constructed to meet state standards. Each unit is chronologically and thematically organized to include the interconnectedness of regions' geographic features, cultural and historical heritage, economic and governmental systems, and religious/spiritual backgrounds and practices to others.

### **CONCEPTS OF AMERICAN GOVERNMENT – FULL YEAR, 1 CREDIT, GRADE 11**

This course is an overview look at the relationship of the three branches of government- legislature, executive and judicial branches. Students will explore the topics of America's political foundations, the Constitution, federalism, political beliefs and behavior, interest groups, elections and the media, civil rights and civil liberties, and the structure and powers of local government. It will also include foreign, domestic and economic policies. It also previews major economic principles that are important throughout the government system.

### **AMERICAN GOVERNMENT – FULL YEAR, 1 CREDIT, GRADE 11**

This course is designed to challenge students to identify, explain, and apply concepts and principles of American Government. Students will explore the topics of America's political foundations, the Constitution, federalism, political beliefs and behavior, interest groups, elections and the media, the structure and powers of federal and local government, comparative political systems, civil rights and civil liberties. It will include foreign, domestic and economic policy. It also previews major economic principles that are important throughout the government system. During the study and investigation of these topics students will use a variety of methods including cooperative learning, individual research, direct instruction, and group discussions.



### **COMBO AMERICAN GOVERNMENT – FULL YEAR; 1 CREDIT ENGLISH/1 CREDIT SOCIAL STUDIES, GRADE 11**

This standards-based course combines English 11, which incorporates the analysis of American and world literature and the government of the United States of America. This team-taught course provides the student with a greater understanding of how literature and history are interwoven. Both objective and subjective assessments are based on Pennsylvania Core Standards and the skills necessary to meet with success on the SAT. Critical reading skills are evaluated with objective standards-based assessments and constructed-response questions. Improvement of students' writing with careful stress on developing elevated diction and more complex, refined syntax is also addressed within the realm of the curriculum and students' writing. This will include constructed-responses and informative, argumentative, and analytical essays.

The Social Studies component is designed to challenge students to identify, explain, and apply concepts and principles of American Government history and in today's world. Students will explore the topics of America's political foundations, the Constitution, federalism, political beliefs and behavior, interest groups, elections and the media, the structure and powers of federal and local government, comparative political systems, civil rights and civil liberties. It will also include foreign, domestic and economic policy.

A strong emphasis is placed on oral and written communication skills and cooperative learning activities; therefore, the students must work well in groups. This course involves a unique community service component. The tenth grade English and Social Studies teachers will recommend students for this course. It will also provide remediation for students who did not achieve proficiency on the Pennsylvania Keystone Exam. Summer reading will be assigned for this course, and a research paper is a course requirement. This course must be taught in conjunction with Combo English 11.

### **CONCEPTS OF GEOGRAPHY – FULL YEAR, 1 CREDIT, GRADE 12**

This course is designed to survey the concepts and methods of geography by examining the terms, tools, these, and practices of geography. Students will explore physical and human geography, by studying topics such as climate, landforms, natural resources, population, history, culture and government. Students will be required to master the locations of physical and political features around the world. Students will be asked to research and present information on various characteristics and features of individual countries from different regions. Finally, students will look at global rituals, norms, customs, and practices thematically by researching topics which are trans-global.

### **GEOGRAPHY – 1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12**

This course will provide an overview of physical and cultural geography for college bound students. A review of the five themes of geography and map skills will start the unit. A detailed look at map projections, graphing and charting of information will occur. Students will be able to research data, organize the data using the correct graph or chart, and display to the class using computer technology. A thorough study of the different climate zones according to Koppen's classification scheme will take place. Students will have the opportunity to learn about the forces of nature and research and present a report to the class. An analysis of the impact man has had on the environment and man's effort to repair that damage will transpire in the second quarter of the course. A cultural study of various regions of the world, including North America, Latin America, Europe, Russia, North Africa, Southwest Asia, Central Asia, Africa South of the Sahara, South Asia, East Asia, and Southeast Asia, will take place. Students will complete each region by assessing problems of the area and potential solutions to those problems.

## **INTRODUCTION TO ENTREPRENEURSHIP – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

This course has been designed to give students a broad introduction to entrepreneurship using an educational model called Problem-Based Learning, PBL. There is significant evidence that students learn more effectively when the presentation of content is coupled with an exercise in solving a problem.

PBL is particularly suitable for this course as entrepreneurship can only really be understood and learned by personally discovering one's capabilities to be creative and moving ideas forward to reality. In this course, students will be developing their own concepts of new business opportunities while learning the skills and accessing the tools that entrepreneurs use. Through this learning method, students will become aware of their own abilities to act entrepreneurially and gain confidence using the acquired skills in developing an exciting and rewarding career.

Topics introduced during the course include: the definition and function of an entrepreneur in small and large organizations, the nature of innovation; discontinuities and market disruption; uncovering new business opportunities; quantifying opportunities; researching competitors and partners; resource planning, and presenting an opportunity for private financing or corporate sponsorship.

Upon completing the course, the student will have a working knowledge of traditional and non-traditional ways of identifying a new opportunity, quantifying the potential, understanding the key competitive factors, researching the audience, and producing a convincing executive presentation for internal or external venture financing and launch.

## **PEACE STUDIES – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

This course is intended to teach students alternatives to violence and confrontation. Students will research and study the various philosophies of pacifism and non-violence and will attempt to incorporate some of these principles into their daily lives. This course will also examine the cause and results of violent behavior throughout the world. Through the use of historical sources, discussion and technology, students will investigate what alternatives can be employed to avoid war and conflict.

Students will trace the development of peace and justice ideals by examining the main tenets of Eastern thought, the Judeo-Christian tradition, the Just War theory and the major writers, philosophers and proponents of peace in the 19<sup>th</sup> and 20<sup>th</sup> centuries.

Topics often covered range from issues of race, genocide, global warming, gender differences, poverty, AIDS, stereotypes, and terrorism.

## **PSYCHOLOGY – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

This course is designed to provide a solid foundation for students who plan on taking additional psychology courses in college. In part one of the class, students will trace the historical development of psychology through the ages, study the functions of the brain, glands, and peripheral nervous system and investigate the origins of human behavior through the life span. In part two of the curriculum, students will learn about how personality shapes the individual and how some people cope with different types of psychological disorders. In the final section of the course students will analyze the importance of the senses in understanding perception and examine the techniques of learning and memory. In an effort to provide students with a well-balanced psychological education, special mini-units will address the development of language and communication, human sexuality, attitude formation and prejudice, and parapsychology.



### **ECONOMICS – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

This course is intended to introduce students to economic concepts and the importance of the economist's view of the world. It previews major economic principles that resonant throughout the principles of economics. Students will have the opportunity to explore the major economic systems, economic theory, business organizations, banking, taxation, Federal Reserve System, and Globalization and International Trade. The study of economics will spark interest in how the local, regional, national and global economy affects student's daily life. Their expose to critical thinking and analytical analysis will provide a better understanding of global economics.

### **SOCIOLOGY – 1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12 (GRADE 10 MUST HAVE TEACHER RECOMMENDATION)**

This course is designed to provide a solid foundation for students planning on taking additional sociology courses in college. It is a comprehensive study of the basic history, concepts, principles, and applications of group theory in contemporary American society. The first part of the course focuses on how culture influences us as well as our socialization, and also compares macro-sociology and micro-sociology. The second part of the course begins with sociological research and then moves on to focus on groups, complete societies, formal organizations and social control with a focus on how these elements work together to maintain social order. Completing at least fifteen (15) hours of community service is a semester-long course requirement designed so students will gain a greater appreciation of their responsibilities and duties as interactive community members and citizens in a democratic society.

### **SOCIAL PROBLEMS – 1 SEMESTER, ½ CREDIT, GRADES 11, 12**

This course provides an in-depth study of current national and trans-national social problems. Emphasis is on causes, consequences, and possible solutions to problems associated with families, schools, workplaces, communities, and the environment. Topics included are: social class in the United States, global stratification, sex and gender relations, race and ethnicity, the elderly, the economy, politics, and marriage and the family. At the end of this course, students will be able to complete the following: identify problems in modern society and understand some of their complexities, recognize ways these problems affect their own lives, differentiate between and apply the sociological theories of Structural-Functionalism, Conflict, and Symbolic Interactionism to problems as a framework for understanding possible causes, purposes, and solutions, learn to think critically and creatively about social problems, and be motivated to take individual actions to improve the world in which we live. While not required, successful completion of the Sociology course is strongly recommended.

### **HISTORY THROUGH MEDIA – 1 SEMESTER, ½ CREDIT, GRADES 10,11,12**

If "Hollywood" history is the main conduit through which many young people will see the past, then History Through Media should help guide students on the visual journey that will allow students to identify the role of motion pictures as a motivating factor in formulating opinions on the heritage of our past. The course will be concerned with the critical analysis of historical data in commercially produced feature films directed primarily or in part at an American audience. The term "Hollywood" should be considered as a generic, not a geographic, term and be applicable to on-location, overseas, and international productions as well as those produced in the traditional Hollywood studio system. Curriculum may include made-for-television movies and miniseries as well as theatrical features. Students via writing assignments will evaluate the accuracy of events, personages, eras, and epochs, and other cultural details of the period covered.

**ADVANCED PLACEMENT UNITED STATES GOVERNMENT AND POLITICS – FULL YEAR, 1 CREDIT, GRADES 11, 12**

AP US Government and Politics provides a college-level, nonpartisan introduction to key political concepts, ideas, institutions, policies, interactions, roles, and behaviors that characterize the constitutional system and political culture of the United States. Students will study U.S. foundational documents, Supreme Court decisions, and other texts and visuals to gain an understanding of the relationships and interactions among political institutions, processes, and behaviors. They will also engage in disciplinary practices that require them to read and interpret data, make comparisons and applications, and develop evidence-based arguments. In addition, they will complete a political science research or applied civics project. (AP US Government and Politics Course Description and Exam, 2018, p. 4)

**ADVANCED PLACEMENT COMPARATIVE GOVERNMENT AND POLITICS – FULL YEAR, 1 CREDIT, GRADE 11, 12**

This course is designed to challenge students to understand fundamental concepts used by political scientists to study the processes and outcomes of politics in a variety of country settings. Selected units of study include: Great Britain, Russia, Mexico, Nigeria, Iran, and China, as well as a unit on terminology used in this field. This class will utilize the integration of technology, cooperative learning, and student activities along with a sizeable amount of independent study and reading. This class has been specifically created to provoke thought among highly-motivated, academically gifted students seeking college credit for a freshman level, introductory Comparative Politics course. All students completing the course are expected to take the advanced placement examination. Students may be able to earn college credits with an appropriate score on the AP Exam.

**ADVANCED PLACEMENT EUROPEAN HISTORY – FULL YEAR, 1 CREDIT, GRADES 11, 12**

The rigor and content contained in this course is comparable to the college level courses Western Civilization I and II. It is strongly recommended that students have demonstrated in-depth understanding and abilities presented in prior Social Studies and English courses. Course content includes the study of European time periods from the Renaissance to the present conditions in Europe. All students completing the course are expected to take the advanced placement examination. Students may be able to earn college credits with an appropriate score on the AP Exam.

**ADVANCED PLACEMENT UNITED STATES HISTORY – FULL YEAR, 1 CREDIT, GRADES 11, 12**

This course will interpret political, social, economic, cultural, and geographic events from the early settlement of North America to developments in modern times. Students will be required to perform writing exercises including informative essays and document-based essays, interpret and analyze historic documents, create projects using multimedia tools, make presentations to the class, and assess events in United States history. The rigor and content contained in this course is comparable to entry level college courses in United States History. It is strongly recommended that students have demonstrated in-depth understanding and abilities of the skills presented in prior Social Studies courses. All students completing the course are expected to take the advanced placement examination. Students may be able to earn college credits with an appropriate score on the AP Exam.

**ADVANCED PLACEMENT MICROECONOMICS/ MACROECONOMICS – FULL YEAR, 1 CREDIT, GRADES 11, 12**

**AP Microeconomics-** The focus of the microeconomic section of this course is to give students a thorough understanding of the principles of economics that apply to the function of individual decision makers, both consumer and producers, within the economic system. It places primary emphasis on the nature and function of the product markets and includes the study of factor markets and of the role of government in promoting greater efficiency and equity in the economy.

**AP Macroeconomics-** The purpose of the macroeconomic section is to give students an understanding of the economic system as a whole. This section places particular emphasis on the study of national income and price-level determination, and also develops students' familiarity with economic performance measures, the financial sector, stabilization policies, economic growth, and international economics.

**ADVANCED PLACEMENT PSYCHOLOGY– FULL YEAR, 1 CREDIT, GRADES 11, 12**

This course is designed for highly motivated students to understand, evaluate, explain, and analyze various topics regularly studied in a college level introduction to Psychology course. A rigorous examination of the following topics will be studied during this year long course: The Science of Psychology, the Biological Perspective, Sensation and Perception, Consciousness: Sleep, Dreams, Hypnosis, and Drugs, Learning, Memory, Cognition, Motivation and Emotions, Stress and Health, Development across the Life Span, Theories of Personality, Psychological Disorders, Psychological Therapies, and Social Psychology. In addition to a substantial amount of independent study and reading, the class will utilize the integration of technology, cooperative learning, and student activities. All students are expected to take the national advanced placement examination. Students may also earn college credit with an appropriate score on the AP examination.

**ADVANCED PLACEMENT HUMAN GEOGRAPHY– FULL YEAR, 1-CREDIT, GRADES 9, 10, 11, 12**

The AP Human Geography course is equivalent to an introductory college-level course in human geography. The course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine socioeconomic organization and its environmental consequences. They also learn about methods and tools geographers use in their research and applications. The curriculum reflects the goals of the National Geography Standards.

The AP Human Geography course is organized around seven major topics: Geography: Its Nature and Perspectives, Population and Migration, Cultural Patterns and processes, Political Organization of Space, Agriculture, Food Production, and Rural Land Use, Industrialization and Economic Development, and Cities and Urban Land Use. Upon successful completion of the course, students will be able to: Interpret maps and analyze geospatial data; understand and explain the implications of associations and networks among phenomena in places; recognize and interpret the relationships among patterns and processes at different scales of analysis; define regions and evaluate the regionalization process; and characterize and analyze changing interconnections among places.

**AMERICAN MILITARY HISTORY-1 SEMESTER, ½ CREDIT, GRADES 10, 11, 12**

This course is designed to provide a comprehensive understanding of the role of the Armed Services in the history of the United States in broad economic, social, political and institutional terms. The course analyzes the development of military policy, examines the characteristics and behavior of the Armed Forces in the execution of policy, and highlights the impact of military policy on foreign relations and domestic development. The course discusses and covers the major campaigns in all of the wars the United States has participated in through history. The details of military operations are limited to those developments and events that demonstrate the capabilities and limitations of the Armed Forces as they implement national policy.

# TECHNOLOGY EDUCATION

## **INTRODUCTION TO TECHNOLOGY** – 1 SEMESTER, ½ CREDIT GRADES 9, 10, 11, 12

The course begins with a measurement unit to teach students how to read a ruler within a sixteenth of an inch. A mechanical drafting unit will follow that demonstrates to kids how to properly read single and multi-view drawings and create drawings to correct size. The students will take the acquired knowledge from the previous two units and combine the skills learned in both to design and build a model bridge that will need to support a minimum amount of weight. The class is concluded with a woodworking unit that exposes the students to various power tools, including a solid state LASER engraver, that are used to build a pre-designed project.

## **TECHNOLOGY SYSTEMS** – 1 SEMESTER, ½ CREDIT GRADES 9, 10, 11, 12

Upon mastery of the material in Introduction to Technology, students may take technology systems. This class will begin by designing and building a model crane out of wood capable of holding a large amount of weight. We will then transition into mouse trap powered vehicles where the students will design and build a car powered solely by the force created from a mouse trap. The third unit has the students design and build a machine that is capable of producing varying amounts of force. The class then moves onto solid fuel powered rockets, where each student builds and launches their own model rocket.

## **MANUFACTURING TECHNOLOGY** – 1 SEMESTER, ½ CREDIT GRADES 10, 11, 12

Upon mastery of the material in Introduction to Technology, students will begin by making a wooden storage box, where they will need to use a CNC router to engrave the lid. This class focuses on woodworking and proper machine tool usage. The class will then be broken down into teams, where each team designs and presents a full size project, and a business plan. The class votes on which project will be made, and the efforts are then focused on manufacturing mass quantities of the project, through the use of modern mass production techniques.

## **MECHANICAL DRAWING, /CADD (level 1)** – 1 SEMESTER, ½ CREDIT, GRADES 9, 10, 11, 12

Students will learn the basic principles of mechanical drafting through the use of traditional hand drawing techniques and computer aided drafting and design (CADD). Students must have a thorough knowledge of addition, subtraction and division of fractions. This class is ideal for students interested in careers related to drawing and design, including architecture and engineering. Students must achieve a passing grade in this class to be eligible to take either Architecture or Solid Modeling. They may take either second level course next. There is no set order for the level 2 courses.

## **ARCHITECTURE** – 1 SEMESTER, ½ CREDIT GRADES 9, 10, 11, 12

Students must have achieved a passing grade in Mechanical Drawing I to be eligible for this class. Students will learn the basic principles of architectural drafting. Students will reinforce sketching techniques, learned in Mechanical Drawing 1. Students will be taught the characteristics of traditional as well as contemporary house designs. They will also learn about: wall details, architectural terminology, and standard sizes and layouts of various floor plans. Emphasis will be placed on the use of the latest architectural CADD software to design and develop architectural drawings. This class is ideal for students interested in architecture, or any career related to drawing and design.

**SOLID MODELING/ENGINEERING & DESIGN (LEVEL 2)– 1 SEMESTER, ½ CREDIT, GRADES 9 (2<sup>ND</sup> SEMESTER), 10, 11, 12**

Students must have achieved a passing grade in Mechanical Drawing I to be eligible for this class. Students will be exposed to the latest advancements in computer-aided drawing and design. Autodesk Inventor will give students a look into the world of solid modeling. Solid modeling is the use of computer graphics/CADD software to create virtual; three dimensional models. Students will also get to perform rapid prototyping through reverse engineering, which is the latest concept in engineering and design. Rapid prototyping is the creation of a product by sending a CADD drawing to a computer numerically controlled (CNC) machine or 3D printer. The CNC machine will then make an exact replica of the part. This class is ideal for students interested in engineering, or any career related to drawing and design.

**ADVANCED CADD APPLICATIONS – 1 SEMESTER, ½ CREDIT, GRADES 11, 12**

Students must have achieved a passing grade in Mechanical Drawing I/CADD, Architecture and Solid Modeling/ Engineering and Design to be eligible for this class. This class will be a culmination of the previous three mechanical drawing courses (Mechanical Drawing I, Architecture, and Solid Modeling). In this class, students will work on more advanced and in-depth problem solving projects, using the software mastered in mechanical drawing levels I and II. They may further their experience with our CNC router, laser engraver, 3D scanner, large format plotter/vinyl cutter and 3D printer. Students will also be introduced to 3D Studio Max which is a drawing and design program that creates virtual environments like those found in video games and computer generated animation.

# WORLD LANGUAGES

**Students studying world languages must demonstrate mastery of the skills outlined in each course description in order to advance to the next level of instruction. Instructor recommendation to continue will be based on evidence of this mastery.**

## **FRENCH 1 – FULL YEAR, 1 CREDIT, GRADES 9, 10, 11, 12**

French 1 is a beginning level course intended for those students who have expressed an interest in learning French. The instruction and the content of the course will be taught in both English and in French. The emphasis is placed on several areas:

1. building vocabulary through thematic study and practice
2. developing elementary conversational skills
3. demonstrating basic understanding of various grammatical constructions
4. obtaining a brief overview of France and other French-speaking countries along with their customs and traditions

With the combined conversational, grammatical and cultural study of French, the students embark on a new educational experience that helps to foster an interest in the French language and the people who speak it throughout the world. French 1 is also the basis for preparation into the subsequent levels of French 2, 3, 4 and Advanced Placement French.

## **FRENCH 2 – FULL YEAR, 1 CREDIT, GRADES 9, 10, 11, 12**

A great deal of the instruction and the content of French 2 will be directed in the French language. Grammar and vocabulary are an essential part of the course. Regular review of grammar constructions and vocabulary themes that were presented in French 1 is conducted along with the introduction of new constructions and themes including: entertainment & leisure, health & medicine, telecommunications, travel, bank & post office, and preparing food. Grammar and vocabulary are integrated with listening and reading comprehension, conversation and/or discussion, writing and some culture of French-speaking areas in the target language. Students will develop a well-balanced proficiency in the four second language acquisition competencies— listening, speaking, reading and writing—as well as experience a target-language-based introduction to francophone culture. This course integrates district cross-curricular and technology goals through various lessons, assignments and experiences that provide real-life application of the grammar and vocabulary being studied. Students will compare and contrast daily life themes, engage in self-expression, develop longer conversational exchanges and read for meaning and pleasure.

### **FRENCH 3 – FULL YEAR, 1 CREDIT, GRADES 10, 11, 12**

A great deal of the instruction and the content of this course will be directed in French. The study of grammar will be an intricate part of this course. There will be an intense review of those grammar constructions that were presented in French 2 along with the introduction of new constructions that will be presented in great detail. The study of grammar is integrated with reading, conversational discussion, writing along with some French culture. French literature is also introduced through the reading of short stories and poems.

The emphasis is placed on several areas:

1. building vocabulary through thematic study and practice
2. developing elementary conversational skills
3. demonstrating basic understanding of various grammatical constructions
4. deepening student's knowledge of France and other French-speaking countries including customs, ethnicities and traditions

With the combined conversational, grammatical and cultural study of French, the students continue their educational experience that fosters interest in the French language and the people who speak it throughout the world. French 3 is also the basis for preparation into the subsequent levels of French 4 and Advanced Placement French.

### **FRENCH 4 – FULL YEAR, 1 CREDIT, GRADES 11, 12**

French 4 is an advanced level course intended to prepare students for the rigor of upper language usage and learning by challenging them to develop critical thinking and problem solving skills. A great deal of the instruction and the content of this course will be directed in French. The study of grammar will be an intricate part of the course this year. There will be an intense review of those grammar constructions that were presented in French 3 along with the introduction of new constructions that will be presented in great detail. Students will also work with different types of auditory comprehension activities that will require oral as well as written student responses. With the combined cultural, literary, grammatical, oral and written study of French, a better command of the language will be emphasized.

### **ADVANCED PLACEMENT FRENCH LANGUAGE AND CULTURE – FULL YEAR, 1 CREDIT, GRADE 12**

Advanced Placement French is a course intended for those students who have successfully completed French 4. AP French is conducted almost entirely in French and students are encouraged to practice French on a consistent basis with both teachers and peers. At the advanced placement level, students will review and refine grammatical constructions and learn and apply new vocabulary that will emphasize both written and oral communication so students may increase their levels of proficiency in each of the language skills: listening, speaking, reading, writing and culture. As students work through the three modes of communication, interpersonal, interpretive and presentational, students will become more proficient in their ability to read and understand various literary genres, participate in conversations, understand directed questions, read newspapers, magazines and Internet articles, and deliver oral and written presentations. Those students who elect to pursue AP French should have had a strong foundation in grammar as well as being competent in the areas of reading, listening comprehension, speaking and writing. Students must also be open to the exploration and understanding of different cultures in relevant and fascinating contexts. Students should be directed toward an understanding of the culture of the target language in relationship to their own viewpoint and should be able to use the target language in real life settings (Global Challenges, Families and Communities, Beauty and Aesthetics, Science and Technology, Contemporary Life). The ultimate goal is that students will be able to communicate, read, and write in a natural and accurate manner. All students completing the course are expected to take the advanced placement examination. Students may be able to earn college credits with an appropriate score on the AP Exam.



### **GERMAN 1 – FULL YEAR, 1 CREDIT, GRADES 9, 10, 11, 12**

German 1 is a beginning level course intended for those students who have expressed an interest in learning German or who are already studying a foreign language and wish to pursue German. The instruction and the content of the course will be taught in both English and in German.

The emphasis is placed on several areas:

1. building vocabulary through thematic study and practice
2. developing elementary conversational skills
3. demonstrating basic understanding of various grammatical constructions
4. obtaining a brief overview of the German-speaking countries and Europe along with their customs and traditions

With the combined conversational, grammatical and cultural study of German, the students embark on a new educational experience that helps to foster an interest in the German language and the people who speak it throughout the world. German 1 is also the basis for preparation into the subsequent levels of German 2, 3, 4 and Advanced Placement German.

### **GERMAN 2 – FULL YEAR, 1 CREDIT, GRADES 9, 10, 11, 12**

This course is intended for those students who have successfully completed German 1. This instruction and the content of the course will be taught in both English and German. The emphasis is placed on several areas:

1. building vocabulary through thematic study and practice
2. developing elementary conversational skills.
3. demonstrating basic understanding of various grammatical constructions
4. obtaining a brief overview of the German-Speaking countries and Europe along with their customs and traditions.

With the combined conversational, grammatical and cultural study of German, The students embark on a new educational experience that helps to foster an interest in the German language and the people who speak it throughout the world. German 2 is also the basis for preparation into the subsequent levels of German 3, 4, and Advanced Placement German.

### **GERMAN 3 – FULL YEAR, 1 CREDIT, GRADES 10, 11, 12.**

This course is intended for those students who have successful completed German 2. The instruction and the content of the course will be taught in both English and in German.

The emphasis is placed on several areas:

1. building vocabulary through thematic study and practice.
2. developing elementary conversational skills
3. demonstrating basic understanding of various grammatical constructions
4. obtaining a brief overview of the German-speaking countries and Europe along with their customs and traditions.

With the combined conversational, grammatical and cultural study of German, the students embark on a new educational experience that helps to foster and interest in the German language and the people who speak it throughout the world. German 3 is also the basis for preparation into the subsequent levels of German 4, and Advanced Placement German.

#### **GERMAN 4 – FULL YEAR, 1 CREDIT, GRADES 11, 12**

German 4 is an advanced level course intended to prepare students for the rigor of upper language usage and learning by challenging them to develop critical thinking and problem solving skills in all areas of German. This instruction and content are directed almost entirely in German. The review and study of grammar is continued, but emphasis is placed on listening, reading, speaking, and writing. Students will have the opportunity to use a variety of learning methods to attain the mastery of the skills, concepts, and vocabulary necessary for success. These methodologies include communication, both personal and interpersonal, direct instruction, and guided inquiry. An overview of the most famous German artists is also presented. A command of the language through writing and oral presentations focusing on the themes of global challenges, science and technology, contemporary life, personal and public identities, families and communities and beauty and esthetics will be an integral part of the course. Technology is integrated whenever appropriate to support and enhance learning.

#### **ADVANCED PLACEMENT GERMAN LANGUAGE & CULTURE – FULL YEAR, 1 CREDIT, GRADE 12.**

Advanced Placement German Language and Culture is a course intended for those students who have successfully completed German 4. The class is conducted almost entirely in German and students are encouraged to practice German on a consistent basis with both teachers and peers. At the advanced placement level, students will review and refine grammatical constructions and learn and apply new vocabulary that will emphasize both written and oral communication so students may increase their levels of proficiency in each of the language skills: listening, speaking, reading, writing and culture. As students work through the three modes of communication, interpersonal, interpretive and presentational, students will become more proficient in their ability to read and understand various literary genres, participate in conversations, understand directed questions, read newspapers, magazines and Internet articles, and deliver oral and written presentations in a logical and convincing manner utilizing appropriate vocabulary and grammatical constructions. Those students who elect to pursue AP German Language and Culture should have had a strong foundation in grammar as well as being competent in the areas of reading, listening comprehension, speaking and writing. Students must also be open to the exploration and understanding of different cultures in relevant and fascinating contexts. Students should be directed toward an understanding of the culture of the target language in relationship to their own viewpoint and should be able to use the target language in real life settings (global challenges, families and communities, beauty and aesthetics, science and technology, contemporary life). The ultimate goal is that students will be able to communicate, read, and write in a natural and accurate manner. All students completing the course are expected to take the advanced placement examination. Students may be able to earn college credits with an appropriate score on the AP Exam.

#### **SPANISH 1 – FULL YEAR, 1 CREDIT, GRADES 9, 10, 11, 12.**

This course introduces the fundamental elements of the Spanish language within a cultural context. Units are developed around focus questions with goals and objectives that motivate students to develop listening, speaking, reading, and writing skills. An emphasis is placed on interpretive, interpersonal, and presentational modes of communication, in order to prepare students to use the language in real-life situations and to begin developing language proficiency in level I. The interwoven elements of the “5C’s”; communication, culture, comparisons, communities, and connections are ever present in order to meet the needs of all students taking the course. Most students will be expected to reach Novice Mid Proficiency level.

**SPANISH 2 – FULL YEAR, 1 CREDIT, GRADES 9,10, 11, 12**

This course is designed as a logical progression from Spanish 1. Students will continue their development of listening, speaking, reading, and writing, while developing a deeper appreciation for the Spanish Culture. Students will be introduced to the new thematic vocabulary and grammatical concepts while building upon previous vocabulary and grammar to facilitate communication and understanding in authentic language situations. Students will exercise with rigor the four language skills regularly to develop proficiency in the second language. This course is conducted for the most part in Spanish and technology is integrated whenever appropriate to support and enhance learning in the second language.

**SPANISH 3 – FULL YEAR, 1 CREDIT, GRADES 10, 11, 12**

This course is designed as a logical progression from Spanish 2. Students will continue their development of listening, speaking, reading and writing, while developing a deeper appreciation for the Spanish culture. Students will be introduced to advanced vocabulary and grammatical structures to facilitate communication and understanding in authentic language situations. Students will exercise with rigor the four language skills regularly to develop proficiency in the second language. This course is conducted for the most part in Spanish and technology is integrated whenever appropriate to support and enhance learning in the second language.

**SPANISH 4 – FULL YEAR, 1 CREDIT, GRADES 11, 12**

Spanish 4 is an advanced level course intended to prepare students for the rigor of upper language usage and learning by challenging them to develop critical thinking and problem solving skills in all areas of Spanish. The instruction and content are directed almost entirely in Spanish. The review and study of grammar is continued, but emphasis is placed on reading, writing, speaking, and listening. Students will have the opportunity to use a variety of learning methods to attain the mastery of the skills, concepts, and vocabulary necessary for success. These methodologies include communication, both personal and interpersonal, direct instruction, and guided inquiry. An overview of the most famous Spanish artists is also presented. A command of the language through writing and oral presentations focusing on the themes of global challenges, science and technology, contemporary life, personal and public identities, families and communities and beauty and esthetics will be an integral part of the course. Technology is integrated whenever appropriate to support and enhance learning.

### **ADVANCED PLACEMENT SPANISH LANGUAGE AND CULTURE – FULL YEAR, 1 CREDIT, GRADE 12**

Advanced Placement Spanish Language and Culture is a course intended for those students who have successfully completed Spanish 4. The class is conducted almost entirely in Spanish and students are encouraged to practice Spanish on a consistent basis with both teachers and peers. At the advanced placement level, students will review and refine grammatical constructions and learn and apply new vocabulary that will emphasize both written and oral communication. As students work through the three modes of communication, interpersonal, interpretive and presentational, students will become more proficient in their ability to read and understand various literary genres, participate in conversations, understand directed questions, read newspapers, magazines and Internet articles, and deliver oral and written presentations. Those students who elect to pursue AP Spanish Language and Culture will have had a strong foundation in grammar as well as being competent in the areas of reading, listening comprehension, speaking and writing. Students must also be open to the exploration and understanding of different cultures in relevant and fascinating contexts. Students will be directed toward an understanding of the culture of the target language in relationship to their own viewpoint and should be able to use the target language in real life settings (Global Challenges, Families and Communities, Beauty and Aesthetics, Science and Technology, Contemporary Life). The ultimate goal is that students will be able to communicate, read, and write in a natural and accurate manner. All students completing the course are expected to take the advanced placement examination. Students may be able to earn college credits with an appropriate score on the AP Exam.

### **MANDARIN CHINESE 1- FULL YEAR, 1 CREDIT, GRADES 9,10,11,12**

Mandarin Chinese is a course where students will learn how to speak, read, and write basic Chinese. Students will also be exposed to Chinese culture which will be compared and contrasted with American culture. This class is divided into six thematic units (intro to Mandarin, interactions, family, dates and times, sports, and colors). It is strongly recommended that students are self-driven and motivated as the coursework goes beyond lectures and direct instruction as this is a distance course, interactive with a live teacher.