

# *Chartiers-Houston School District*



Chartiers-Houston Junior-Senior High School  
2050 West Pike Street  
Houston, Pennsylvania 15342

## ***COURSE SELECTION BOOKLET***

### **2018 - 2019**

Principal:

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Chartiers-Houston Junior-Senior High School  
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## **COURSE SELECTION BOOKLET**

### **INTRODUCTION**

This booklet is designed for the use of students who will be enrolled in grades 9, 10, 11, 12 at Chartiers-Houston Junior-Senior High School during the 2018-2019 School year.

It is necessary that course selections for the next school year be completed as soon as possible. This will enable school personnel to evaluate material needs, class size, number of classes, etc.

In selecting courses for next year, you should consider the following: (1) the graduation requirements of Chartiers-Houston High School, (2) the courses that will meet future vocational and/or educational needs, and (3) your ability and aptitude to meet the class requirements. In order to achieve this agenda, you, the student, must plan and understand yourself, your capabilities, interests and limitations.

You should plan ahead and discuss your course selections with parents/guardians, counselors, teachers or principals. If you wish to talk with the guidance counselor, you can make an appointment before going to first period in the morning. Parents or guardians wishing to discuss your selection(s) can call 724-745-3350 to schedule an appointment with a principal or guidance counselor. Students are reminded that it is their responsibility to ensure that all graduation requirements are met.

### **COURSE REQUIREMENTS**

As you select your courses, attention should be given to **course requirements**, **prerequisites**, and **course sequence**. You should realistically assess your capabilities, ambitions, and past achievements. If you have any doubts and/or questions concerning a course or your chances of success in it, you are certainly encouraged to discuss it with the appropriate teacher, counselor, or principal.

**IMPORTANT NOTICE TO STUDENTS AND PARENTS: BE ABSOLUTELY CERTAIN OF YOUR SELECTIONS. THERE WILL BE NO STUDENT OR PARENT INITIATED SCHEDULE CHANGES AFTER THE FIRST TEN DAYS OF SCHOOL. DROPPING A COURSE AFTER THE 10 DAY PERIOD WILL RESULT IN A WITHDRAW FAIL (WD/F) ON YOUR TRANSCRIPT**

## REQUIREMENTS

ALL STUDENTS ARE REQUIRED TO SCHEDULE A MINIMUM OF SIX FULL CREDIT COURSES EACH YEAR, PLUS WELLNESS (Grades 9-12).

### GRADUATION REQUIREMENTS

| <u>Credits</u>     |       |
|--------------------|-------|
| English            | 4     |
| Social Studies     | 4     |
| Mathematics        | 4     |
| Sciences           | 3     |
| Arts or Humanities | 2     |
| Wellness           | 2     |
| Electives          | 5     |
| Graduation Project | 1     |
|                    | ----- |
| Total              | 25    |

### GRADE LEVEL PROMOTION

Grades 7 and 8: Admission to grade 9 is based on the satisfactory completion of 3 of the 4 academic subjects (English, Math, Science, Social Studies.)

The policy guidelines for grades 9, 10, 11, 12 are as follows:

Grade 9: Satisfactory completion of at least 5 total credits  
Grade 10: Satisfactory completion of at least 12 total credits  
Grade 11: Satisfactory completion of at least 18 total credits

### GRADING SCALE

A = 100 – 90  
B = 89 – 80  
C = 79 – 70  
D = 69 – 60  
F = 59 - 0

### COURSE WEIGHTING

AP, College in H.S. & Advanced Courses will be awarded additional quality points as follows:  
AP courses awarded 1.0  
College in H.S. courses awarded .5  
Advanced courses awarded .25

**\*AP COURSE EXPECTATIONS- ALL ENROLLED STUDENTS WILL BE EXPECTED TO TAKE THE AP EXAM. ANY STUDENTS NOT TAKING THE AP EXAM WILL NOT RECEIVE THE ADDITIONAL QUALITY POINT.**

### GRADUATION PROJECT

All students are required to complete the following for their Graduation Project. This project will count as 1.0 credit toward graduation.

REQUIREMENTS: Grade 9 - 10 Hours Community Service  
Grade 10- 10 Hours Community Service and (1) Career Shadowing Experience  
Grade 11/12 - (3) Training/ Career Exploration Experience (Colleges/Military visits)

**\*MANDATORY REMEDIATION - All Chartiers-Houston High School Students are required to participate in standardized assessments. Students who fail to meet levels of proficiency will be scheduled to attend a remediation course identified by the district.**

## **SCHEDULE CORRECTIONS AND CHANGES**

Ordinarily, we expect student's to retain the program they have selected with the advice and consent of their parents. There are however, circumstances that arise which necessitate a change in an elected course. When **valid reasons** are presented and the parent agrees, adjustments may be made within the **first ten school days**.

### **VALID REASONS FOR A SCHEDULE CORRECTION:**

1. Scheduling Error
2. Summer school work completed
3. Insufficient credit for graduation
4. Placed in the wrong level of a course
5. Administrative Discretion

### **PROCEDURES**

**During the first ten days of school**, the counselor will make corrections in schedule errors without additional approval. These changes will be made through the **\*Schedule Change Form**

**After the first ten days**, all requests for schedule changes must be done in the following manner:

1. Students must obtain and complete a **\*Schedule Change Form** from the counselor
2. All teachers involved with the drop or change must sign the form
3. Parent/Guardian and Student must sign the form acknowledging that the student will now receive a WD/F
4. The signed form must be returned to the counselor
5. A WD/F will be issued to the student on his or her transcript
6. The WD/F may be made up at a later date resulting in the replacement of a new grade

\*The Schedule Change Form may be picked up in the Guidance Office or the High School Main Office.

### **TRANSFER COURSES**

If a student transfers from one section of a course to another, grades at the time of the change will be forwarded to the new teacher and included as part of the total year's grade.

## **CAREER & TECHNICAL EDUCATION**

### **WESTERN AREA CAREER AND TECHNOLOGY CENTER**

The Western Area Career and Technology is intended for those 10th, 11th, and 12th grade students who have the interest and the ability to profit from courses in career/technical education. This training prepares students for entry employment in various business and industries post secondary.

Students enrolled in this program are required to take English, Social Studies, Science, Math, Arts or Humanities & Wellness at Chartiers-Houston High School.

**STUDENTS SELECTED TO ATTEND W.A.C.T.C ARE COMMITTED TO REMAIN THE ENTIRE SCHOOL YEAR.**

All programs at W.A.C.T.C. are competency-based programs designed to prepare students for successful entry-level employment.

The content of each instructional program is based upon an occupational analysis of industry and is periodically adjusted to reflect local employment needs and opportunities as determined by the instructors, administration and occupational advisory committees.

Students who elect to attend the W.A.C.T.C. will attend Chartiers-Houston for one-half of the school day. Transportation will be provided to the W.A.C.T.C. for the other half of the school day.

### **WACTC VOCATIONAL PROGRAMS**

**Areas of Vocational-Technical Education are three-year programs (Grades 10, 11, 12) and include:**

#### **AUTO MECHANICS**

##### **Course Objective:**

Students will obtain education and skills to work as mechanics in the automobile industry.

##### **Course Description:**

The three-year Automotive Mechanics program is for tenth, eleventh, and twelfth grade students. This program will prepare students for employment in the auto repair industry working with parts, tune-ups, brakes, transmissions, electrical and fuel systems. The program will also assist in the diagnosis and repair of various drivability conditions, and routine vehicle maintenance. Students will be able to obtain a PA Inspection Certification.

#### **CARPENTRY**

##### **Course Objective:**

Students will obtain education and skills in various areas of carpentry.

##### **Course Description:**

This three-year program prepares tenth, eleventh, and twelfth graders for all phases of residential carpentry. The course is taught in sequence with the construction of a house. Site layout, footer layout and forming, rough framing, exterior finish and roofing, insulation, drywall, and interior finish are covered. Each unit is taught in conjunction with related safety, estimating, and blueprint reading. Completers achieve skills needed to attain employment as a carpenter. Students will be able to obtain NCCER & PA Home Builder certification.

## **COLLISION REPAIR TECHNOLOGY**

### **Course Objective:**

Students will obtain education and skills for employment in collision repair. Current technology and Automotive Service Excellence (A.S.E.) standards are implemented in this demanding trade.

### **Course Description:**

Through theory and related hands-on classroom instruction, students in this program will learn the latest techniques in five major topics. Upon completion, students will take the Automotive Service Excellence (A.S.E.) certification exam and the Martin Senour Paint certification exam.

## **COSMETOLOGY**

### **Course Objective:**

Students will obtain education and skills in preparation for the Pennsylvania State Board Cosmetology Examination. Students may take this exam after completing 1250 hours in the program.

### **Course Description:**

Cosmetology is a three-year course for tenth, eleventh, and twelfth grade students. The course will be operated by the Western ACTC under the regulations of the State Board of Cosmetology. Students with regular attendance will receive the required 1250 hours of training needed to take the State Board exams for licensing. PA Cosmetology license may be obtained.

## **CULINARY ARTS**

### **Course Objective:**

Students will obtain education and skills to work in the food service industry.

### **Course Description:**

Instruction includes theory and applications related to food preparation, menu and banquet planning, food and beverage purchasing, quality control, cost analysis, safety, and sanitation. Students learn the safe and proper use of hand tools in the industry. Program components include Commercial Baking, Catering, Regional and International Foods, Meat Cutting, Cooking Methods, Nutrition, Safety, and Sanitation. Program completion qualifies students for positions in the food service industry or advanced study at a culinary institute or college. The culinary program includes hospitality coursework providing practical experiences in lodging management, office operation, leadership and management; marketing, food and beverage service; and operation of the physical plant. Students may obtain ServSafe certification

## **ELECTRICAL OCCUPATIONS**

### **Course Objective:**

Students will obtain education and skills to work as electricians or electrical technicians.

### **Course Description:**

Tenth, eleventh, and twelfth grade students are prepared for employment in the fields of residential, commercial, and industrial wiring, installation, and maintenance of equipment including electrical motors, transformers, control systems, communications systems, fiber optics, and related equipment. Students will be able to receive certifications in West Penn Wire CDT (fiber optics), NCCER & PA Home Builders.

## **EMERGENCY & PROTECTIVE SERVICES**

### **Course Objective:**

Students will obtain education and skills in the areas of firefighting, police work, and emergency medical technician.

### **Course Description:**

This course provides three years of classroom and practical experience for entrance into the field of public safety via in-depth training to perform duties as a police officer, fire fighter, emergency medical technician, and other public safety-related careers. The application of math, English, communications, science, and physics is demonstrated throughout the course. Students receive training in social and psychological skills, vehicle and equipment operations, the judicial system, pre-hospital emergency medical crew, fire prevention

and control, hazardous materials, and emergency management. Students may be eligible to receive EMT certification.

### **HEALTH ASSISTANT**

#### **Course Objective:**

Students will obtain education and skills to be certified as a nursing assistant in Pennsylvania at the end of senior year.

#### **Course Description:**

The course prepares students for careers in the health field. Students are provided clinical experiences in long-term care facilities to enhance the learning experience and assist in the transition to employment. Core curriculum includes an Overview of Health Careers, Basic Anatomy and Physiology, Medical Terminology, Basic Nursing Procedures, Universal Precautions, Legal and Ethical Aspects of Health Care, and Communication Skills. Students are also provided instruction to qualify them for certification in First Aid, CPR and CNA.

### **HEATING VENTILATION & AIR CONDITIONING**

#### **Course Objective:**

Students will obtain education and skills to work as installers, sheet metal fabricators, and service technicians in the field of heating, ventilation, and air conditioning.

#### **Course Description:**

Heating & Air Conditioning is a 3-year program that prepares tenth, eleventh, and twelfth grade students for employment to assist the mechanic in the servicing and installation of residential and commercial heating and cooling systems. Students are also prepared for the EPA certification exam for safe refrigerant handling, NCCER & PA Home Builders certification.

### **MACHINE SHOP**

#### **Course Objective:**

Students will obtain education and skills that emphasize CNC computerized training in order to place students in modern, high-tech positions.

#### **Course Description:**

This three-year course provides tenth, eleventh, and twelfth graders the skills needed for entry into the machining field through basic hands-on machining practice on lathes, milling machines and grinders. Topics include set-up, tool selection, and methods used on various materials such as steel, aluminum, and brass. Computer-part programming and machine operation are also included in the training. NIMS certification is eligible for students.

### **MASONRY**

#### **Course Objective:**

Students will obtain education and skills to work as a mason. Emphasis is also placed on leadership skills and a strong work ethic.

#### **Course Description:**

This three-year instructional program prepares students in brick, block, stone, concrete, tuck pointing, and artificial stone construction. Students learn the types and sizes of masonry materials, various applications for materials, blueprint reading, masonry symbols, use of measuring instruments, leveling instruments, layout and design, bonds, hand tools, masonry equipment, mortar mixing, concrete mixing, estimation, practical problems in mathematics, preparation of material lists, masonry saw, tile saw, 14" dry cut saw, hammer drill, demolition, fireplaces, chimneys, barbecue fireplace, steps, walls, scaffold construction, etc. NCCER & PA Home Builder certifications are eligible for students.

## **AUTOMATION & ROBOTICS ENGINEERING**

### **Course Objective:**

Students will obtain education and skills in mechatronics related to engineering-related fields, industry and Marcellus shale employment.

### **Course Description:**

This three-year course focuses on all aspects of industrial and commercial machines and robotics and is designed to prepare students for work in industry or continued education in engineering-related fields. The program includes design activities and instruction in operation, set-up, maintenance, troubleshooting, and repair of machines and systems found in commercial, packaging, medical, and food production facilities where high tech equipment is used. Curriculum and instruction include the areas of Electricity, Electronics, Sensor Technology, Machine Operations and Maintenance, Industrial Electronics, Computer Machine controls, Machine Repair, Motors and Control Applied Physics, Fluid Power, Mechanical Components, Schematic Interpretation and Quality Control. Students are trained on a wide variety of tools for preventative maintenance and construction of equipment.

## **NETWORKING**

### **Course Objective:**

Students will obtain education and skills in the field of computer networking for small businesses.

### **Course Description:**

This three-year program provides tenth, eleventh, and twelfth graders with meaningful training toward a career and/or further study in the rapidly expanding occupational area through gainful, positive experiences whether or not they are coming from districts having their own networking programs. This program provides information and hands-on activity leading to certifications such as Cisco, Microsoft Certified Engineer, A+, and others. Networking topics include Software, Hardware, Operating Systems, Installation, and Solutions.

## **WELDING**

### **Course Objective:**

Students will obtain education and skills in various areas of welding.

### **Course Description:**

Prepares students in oxy-fuel, shielded metal arc, gas metal arc, gas tungsten arc, flux core welding, carbon arc, plasma cutting, manual and radiograph cutting, and oxy-fuel brazing processes. Tenth, eleventh, and twelfth grade students learn the use of measuring instruments, hand tools, portable grinders, metallurgy, blueprint reading, electrical principles, layout and design, fabrication, practical problems in math, preparation of material lists, cost estimating, and quality assurance methods. Successful students will be given the opportunity to earn AWS certification

## ENGLISH

Language Arts offerings are designed to enhance development in all areas of communication including reading, writing, speaking, and listening. Course content will focus on using proper conventions of grammar and usage, analyzing and interpreting selections in a variety of genres, developing research skills, and applying career-enhancing reading and writing skills.

| <u>COURSE NAME</u>        | <u>GRADE</u> | <u>CREDITS</u> |
|---------------------------|--------------|----------------|
| <u>ACADEMIC ENGLISH 9</u> | 9            | 1              |

Students study and practice the basic concepts of composition, concentrating on sentence structure, grammatical construction, paragraph building, and multi-paragraph essays, as well as the creation of compare/contrast, informative, narrative, and persuasive essays. Students focus on the essential components of a Modern Language Association (MLA) research paper. Students study genres of literature such as short stories, poetry, drama, nonfiction, and novels for their structure and analyzed for use of figurative language, style, tone, and author's point of view, etc. Students study vocabulary within the context of the literature emphasizing correct usage. Also, students must present a prepared speech to the class. Microsoft 365 will be integrated in class to allow students to incorporate 21<sup>st</sup> Century learning for all post-secondary endeavors

Prerequisite: None

|                            |    |   |
|----------------------------|----|---|
| <u>ACADEMIC ENGLISH 10</u> | 10 | 1 |
|----------------------------|----|---|

Students focus on the analysis of structure, literary techniques, and author's point of view through a variety of genres including, novels, short stories, poetry, drama, and non-fiction. The texts will be analyzed to examine deeper meaning; both literally and figuratively. Students will be expected to be actively engaged with the text to go beyond the written words but to make connections to literature, history, and world events. Preparation for the PA Keystone Literature Exam, in which all areas of the exam will be addressed throughout the study of each academic unit. Students will craft well-written essays that include specific details as well as support from the text as well as their own perspective. Technical research writing will be focused on as well, paying particular attention to posing an argument, researching for credible information, and including Modern Language Association (MLA) formatting. Students will continue their study of vocabulary, both within the text and independently. There will be a public speaking requirement through speeches, debates, and/or presentations. Microsoft 365 will be integrated in class to allow students to incorporate 21<sup>st</sup> Century learning for all post-secondary endeavors.

Prerequisite: None

|                            |    |   |
|----------------------------|----|---|
| <u>ACADEMIC ENGLISH 11</u> | 11 | 1 |
|----------------------------|----|---|

Microsoft 365 will be integrated in class to allow students to incorporate 21<sup>st</sup> Century learning for all post-secondary endeavors and to help make them more astute students of fiction and nonfiction literature. American literature is central; however, Shakespeare can be included. This is not strictly a literature course as there will be a strong focus on refining writing skills and building strong research foundations. Course work emphasizes higher-level thinking skills, including analysis, synthesis, evaluation, and creativity. Units can include: tests, projects, historical and socio-cultural context, active and silent reading, the craft of writing, vocabulary study, spoken and written response to literature, research, and specific literary terminology.

Prerequisite: None

| <u>COURSE NAME</u>         | <u>GRADE</u> | <u>CREDITS</u> |
|----------------------------|--------------|----------------|
| <u>ACADEMIC ENGLISH 12</u> | 12           | 1              |

Students prepare for post-secondary education and career preparation through World literature fiction and nonfiction works. A strong emphasis will be on career readiness through historical and cultural influences. Oral and written communications will be addressed through presentations, writing portfolios and mock interviews. Students will also study research methods and create a formal research paper. Microsoft 365 will be integrated in class to allow students to incorporate 21<sup>st</sup> Century learning for all post-secondary endeavors

Prerequisite: None

|                                 |      |    |
|---------------------------------|------|----|
| <u>KEYSTONE CORE LITERATURE</u> | 9-12 | .5 |
|---------------------------------|------|----|

Individual learning and small groups will focus on Reading for Meaning Fiction, Reading for Meaning Non-Fiction, Analyzing and Interpreting Literature – Fiction, or Analyzing and Interpreting Literature – Non-Fiction. Students will utilize novels and reading passages to enhance their comprehension of text. By breaking apart the text, students will also increase their analytical skills. Vocabulary will be a key component of the course as well. By expanding vocabulary and working with context clues the students will use these strategies to increase comprehension, which will allow them to answer test-like questions to prepare for the Keystone Literature test.

**\*\*Required if not proficient on the Keystone Literature Exam\*\***

### ADVANCED ENGLISH

Advanced English 9-12 is an accelerated English program that will provide the opportunity for highly motivated students to explore and study the world's great literature. Each course is designed to challenge the students to become both critical thinkers and communicators through an analysis of a variety of genre.

|   |   |   |
|---|---|---|
| <u>*ADVANCED ENGLISH 9</u><br>Additional .25 quality points | 9 | 1 |
|---|---|---|

Students study and practice the basic concepts of composition, concentrating on sentence structure, grammatical construction, paragraph building, and multi-paragraph essays, as well as the creation of compare/contrast, informative, narrative, and persuasive essays. Students focus on the essential components of a Modern Language Association (MLA) research paper. Students study genres of literature, such as short stories, poetry, drama, nonfiction, and novels for their structure and analyzed for use of figurative language, style, tone, point of view, etc. Students study vocabulary within the context of the literature emphasizing correct usage. Also, students must present a prepared speech to the class. Students have additional rigorous and independent reading/writing assignments. Microsoft 365 will be integrated in class to allow students to incorporate 21<sup>st</sup> Century learning for all post-secondary endeavors. **Students enrolling in this course will receive a summer reading assignment and a brief, response-based writing assignment for a selected reading.**

Prerequisite: Test Scores / Teacher recommendation

| <u>COURSE NAME</u>  | <u>GRADE</u> | <u>CREDITS</u> |
|---|--------------|----------------|
| <b><u>*ADVANCED ENGLISH 10</u></b><br>Additional .25 quality points | 10           | 1              |

Students will analyze a variety of genres including novels, short stories, poetry, drama, and non-fiction to focus on analysis of structure, literary techniques, and author’s point of view. The texts will be analyzed to examine deeper meaning; both literally and figuratively through annotation. Students will have independent reading assignments throughout the year. Preparation for the PA Keystone literature Exam, in which all areas of the exam will be addressed throughout the study of each academic unit. The students will use their study of literature as a vehicle for their compositions, while connecting universal themes to modern day examples. Technical research writing will be focused on as well, paying particular attention to posing an argument, researching for credible information, and including Modern Language Association (MLA) formatting. Students will continue their study of vocabulary both within the text and independently. There will be public speaking requirements through speeches, debates, and/or presentations. Microsoft 365 will be integrated in class to allow students to incorporate 21<sup>st</sup> Century learning for all post-secondary endeavors. **Students enrolling in this course will receive a summer reading assignment and a brief, response-based writing assignment for a selected reading.**

Prerequisite: Test scores / Teacher recommendation

|  |        |   |
|--|--------|---|
| <b><u>*ADVANCED PLACEMENT ENGLISH LANGUAGE &amp; COMPOSITION</u></b><br>Additional 1 quality point | 11, 12 | 1 |
|--|--------|---|

The AP® English Language and Composition course is designed to focus on a rhetorical analysis of nonfiction prose and the development and revision of well-reasoned, evidence-centered analytic and argumentative writing. The study of prose in AP Language will facilitate informed citizenship and increase student capacity to enter into intellectual conversations, verbally and written, about meaningful issues. Students will learn skills to effectively analyze text organization, syntax, rhetorical devices, and argumentative strategies. Because our students live in a highly visual world, we also study the rhetoric of visual media such as photographs, advertisements, comic strips, graphs, and infographics. **Summer reading and writing is required for this course. and materials will be distributed to students near the end of the current school year.**

Prerequisite: Department recommendation  
“B” average in their previous English course

|   |    |   |
|---|----|---|
| <b><u>*ADVANCED ENGLISH 12</u></b><br>Additional .25 quality points | 12 | 1 |
|---|----|---|

Students prepare for post-secondary education through the study of fiction and nonfiction works of World literature. Students integrate historical and cultural influences, while learning to apply critical lenses, preparing them for the rigors of collegiate study. Students will write critical analyses of works and write creatively. Students will also study research methods and create a formal research paper. Microsoft 365 will be integrated in class to allow students to incorporate 21<sup>st</sup> Century learning for all post-secondary endeavors. **Summer reading and writing is required for this course, and materials will be distributed to students near the end of the current school year.**

Prerequisite: Test scores / Teacher recommendation

| <u>COURSE NAME</u>   | <u>GRADE</u> | <u>CREDITS</u> |
|--|--------------|----------------|
| <b><u>*ADVANCED PLACEMENT<br/>ENGLISH LITERATURE &amp; COMPOSITION</u></b><br>Additional 1 quality point | 11, 12       | 1              |

The AP ® (Advanced Placement) English Literature and Composition is designed to provide students with the rigor of a typical undergraduate English Literature course. This course will survey British and American texts from the 16th century to the present and will be organized by theme to ensure opportunities for comparison and analysis between poems, novels, essays, and short stories. The goal of the course is to enhance a student’s close reading skills, provide opportunity for discussion practice, and develop their analytical and critical writing skills. Students will learn how to identify themes of literature independently and how to articulate the evidence necessary to argue their reading of the text. This course serves as a solid foundation for any student who plans on pursuing a degree in humanities, art, and/or culture. **Summer reading and writing is required for this course and materials will be distributed to students near the end of the current school year.**

Prerequisite: Department recommendation  
“B” average in their previous English course

### **ENGLISH ELECTIVES**

|                                       |       |   |
|---------------------------------------|-------|---|
| <b><u>JOURNALISM/ COMPOSITION</u></b> | 10-12 | 1 |
|---------------------------------------|-------|---|

Journalism is the study of mass media and its role in a democratic society. Students will write news stories, editorials, features, sports stories, columns, and other features within a newspaper. They will be taught the responsibilities and ethics necessary for excellence in the media, and are responsible for producing a newsletter. A focus on the continuing development of composition skills is a major component of this course. Only students committed to the creation of quality printed material should elect to take this course.

|                             |        |   |
|-----------------------------|--------|---|
| <b><u>JOURNALISM II</u></b> | 11, 12 | 1 |
|-----------------------------|--------|---|

In Journalism II, students who have successfully completed Journalism I may continue to write news, feature and other stories with a special focus on the Chartiers-Houston community. Journalism II students will be responsible for leadership in the publication of a class newsletter, and for mentoring Journalism I students.

## SOCIAL STUDIES

| <u>COURSE NAME</u> | <u>GRADE</u> | <u>CREDITS</u> |
|--------------------|--------------|----------------|
|--------------------|--------------|----------------|

|                            |   |   |
|----------------------------|---|---|
| <u>AMERICAN CULTURES I</u> | 9 | 1 |
|----------------------------|---|---|

American Cultures I explores the beginning of society in the United States, starting with the European exploration of the New World. The course investigates the establishment and development of the English colonies in North America and the three-way struggle for control of North America by the French, English and Indians. The student will discuss and evaluate the economic, social and political motivations for the Revolution leading to independence. They will examine the country's expansion and analyze the causes of the civil war. The students will develop an understanding of the philosophy and structure of American government.

|                             |    |   |
|-----------------------------|----|---|
| <u>AMERICAN CULTURES II</u> | 10 | 1 |
|-----------------------------|----|---|

American Cultures II is a continuation of the freshman course. The course begins after the Civil War and continues through the twentieth century. Emphasis is placed on political, social & economic developments and intellectual, moral, and military ideas are presented.

Prerequisite: American Cultures I

|                              |        |   |
|------------------------------|--------|---|
| <u>AMERICAN CULTURES III</u> | 11, 12 | 1 |
|------------------------------|--------|---|

**American Cultures III is an elective Social Studies course offered to juniors. It will meet the requirement for a Social Studies credit in the senior year.** American Cultures III is an advanced history class designed to offer unique material never previously offered or only briefly mentioned in other social studies classes. The time period discussed will center primarily on the 1960's to the present time. We will look closely at Vietnam's impact in the United States. We will study and analyze the social, political, and military events of the Cold War, the Nixon years, the Gerald Ford-Jimmy Carter administrations, the Reagan Revolution, the Bush-Clinton-Bush administrations, and the history of terrorism.

Prerequisite: American Cultures I & II

|            |            |   |
|------------|------------|---|
| <u>LAW</u> | 10, 11, 12 | 1 |
|------------|------------|---|

**Law is an elective Social Studies course offered to sophomores and juniors. It will meet the requirement for a Social Studies credit in the senior year.** The course focuses on modern United States law, by way of its history and evolution. The content of the Law course includes: the goals of law; ethics of law; history of the United States legal system; individual rights and liberties; criminal law; civil law/ torts; juvenile law; consumer, business, and housing law; family law; and judicial procedure.

Highlighting this course is witness to a federal and/ or county court case(s), a mock trial, and guest speaker(s). Assignments, individual and group projects, Internet activities, Assessments and class participation characterize the rigor of the Law course.

| <u>COURSE NAME</u> | <u>GRADE</u> | <u>CREDITS</u> |
|--------------------|--------------|----------------|
|--------------------|--------------|----------------|

|                       |    |   |
|-----------------------|----|---|
| <u>WORLD CULTURES</u> | 11 | 1 |
|-----------------------|----|---|

World Cultures will introduce students to a background of the world’s cultures and briefly examines the early culture and history of the peoples inhabiting the five major continents. The student will discuss and evaluate the political, economic, and cultural developments of these societies to the present. Students will participate through class discussions, oral and written reports, group competitions, interpretive drawings, and analytical compositions.

Prerequisite: American Cultures II

|                  |            |   |
|------------------|------------|---|
| <u>ECONOMICS</u> | 10, 11, 12 | 1 |
|------------------|------------|---|

**Economics is an elective Social Studies course offered to sophomores and juniors. It will meet the requirement for a Social Studies credit in the senior year.** Students will engage in the study and application of economics principles using textbooks, workbooks, newspapers and multi media. In an effort to provide the most current educational resources, materials have been collected from such sources as the Wall Street Journal Classroom Edition and Economics Pennsylvania. Students can be expected to explore career options, engage in personal finance management and conduct brief presentations of current economic issues.

|                   |    |   |
|-------------------|----|---|
| <u>PSYCHOLOGY</u> | 12 | 1 |
|-------------------|----|---|

Social Science Research is designed to introduce academically oriented students to research techniques. Students are taught interviewing methods, library research, phrasing techniques, and the basic components of a research paper. Students will produce a major research paper that will be counted as part of their 9 weeks grade and as the mid-term.

Psychology is an in-depth study of the various aspects of human development and the causes of human behavior. Emphasis is on the student’s relationships with his peers, parents, and future family. Students will participate in discussions, experiments, activities, and evaluations to demonstrate their knowledge of the subject. This course fulfills a course requirement for social studies.

Prerequisite: World Cultures

|  |        |   |
|--|--------|---|
| <u>*ADVANCED PLACEMENT UNITED STATES HISTORY</u><br>Additional 1 quality point | 11, 12 | 1 |
|--|--------|---|

**AP United States History is an elective Social Studies course offered to juniors and seniors.** The AP United States History course is designed to provide students with the analytic skills and factual knowledge necessary to deal critically with the problems and materials in United States history from 1607 to 1996. By making demands upon students equivalent to those made by a full-year introductory college course, such as: integration of extensive reading; teaching by students; writing; visual aids; and comparison, the students will be prepared for intermediate and advanced college courses. Students will learn to assess historical materials – their relevance to a given interpretive problem, reliability, and importance – and to weigh the evidence and interpretations presented in historical scholarship. The AP United States History course will thus develop the skills necessary to arrive at conclusions on the basis of an informed judgment and to present reasons and evidence clearly and persuasively in essay format. Extensive out of class assignments, independent projects, and frequent assessment define the rigor of this

course. A summer assignment of reading and keeping a log/journal is **required**. This course will be a rotating course every other year with AP U.S. Government & Politics. ★This course **WILL** be offered for 2018-2019.

Prerequisite: Test scores / Teacher recommendation

| <u>COURSE NAME</u>   | <u>GRADE</u> | <u>CREDITS</u> |
|--|--------------|----------------|
| * <b>ADVANCED PLACEMENT U.S. GOVERNMENT &amp; POLITICS</b><br>Additional 1 quality point | 11, 12       | 1              |

The goal of the AP U.S. Government & Politics course is to provide an in-depth understanding of the operation of America’s national government. The course will be guided by the major areas of U.S. government that are emphasized by the college testing service guidebook: Constitutional Underpinnings; Civil Rights and Civil Liberties; Political Beliefs and Behaviors of Individuals; Political Parties, Interest Groups, and the Mass Media; the Major Institutions of National Government; Public Policy. This course will give students an analytical perspective on government and politics in the United States. It will include both the study of general concepts used to interpret U.S. politics and the analysis of specific contemporary examples. It also requires students to familiarize themselves with the various institutions, groups, beliefs, and ideas that constitute our political system. Students will become familiar with the variety of theoretical perspectives and explanations for various behaviors and outcomes. This course will be a rotating course every other year with AP U.S. History. ★This course **WILL NOT** be offered for 2018-2019.

Prerequisite: Test scores / Teacher recommendation

|                            |        |   |
|----------------------------|--------|---|
| <b><u>WORLD WAR II</u></b> | 11, 12 | 1 |
|----------------------------|--------|---|

**World War II is an elective Social Studies course offered to juniors. It will meet the requirement for a Social Studies credit in the senior year.** The course focuses on World War II, including its early stages, the campaigns and the aftermath. The content of the course includes: analyzing how the end of World War I led to World War II, Nazi Germany, World Leaders, Geography, The Holocaust, Propaganda, War Games, the European campaign, the Pacific campaign, the end of the war and the aftermath.

Prerequisite: American Cultures II

**TEACHER RECOMMENDED SCIENCE SEQUENCE**

- The sequences below are designed to be *suggested* courses of study.
- Students are encouraged to speak with their current science teacher.
- Students must obtain the signature of their current science teacher for the following year’s science course selection.

**STUDENTS MUST TAKE THREE OF THE FOLLOWING CLASSES:**

- **BIOLOGY** \*Required for Keystone
- **CHEMISTRY I**
- **PHYSICS I**
- **EARTH SYSTEMS SCIENCE**
- **PHYSICAL SCIENCE**

**Minimum** Requirements:

| 9 <sup>th</sup> grade | 10 <sup>th</sup> grade | 11 <sup>th</sup> or 12 <sup>th</sup> grade-Select one  |
|-----------------------|------------------------|--|
| Biology I             | Earth Systems Science  | Chemistry I<br>or<br>Physics<br>or<br>Physical Science |

Suggested sequence for the **College Bound/Non-Science** student:

| 9 <sup>th</sup> grade | 10 <sup>th</sup> grade  | 11 <sup>th</sup> grade  | 12 <sup>th</sup>  |
|-----------------------|---|---|---|
| Biology I             | Earth Systems Science<br>or<br>Chemistry I<br>or<br>Physics<br>or<br>AP Physics 1 | Chemistry I<br>or<br>Physics<br>or<br>Earth Systems Science<br>or<br>Physical Science | Chemistry I<br>or<br>Physics<br>or<br>Earth Systems Science<br>or<br>Physical Science |

Suggested sequence for the **College Bound Science** student:

| 9 <sup>th</sup> grade           | 10 <sup>th</sup> grade   | 10 <sup>th</sup> , 11 <sup>th</sup> and 12 <sup>th</sup> grade   |
|---------------------------------|--|--|
| Biology I<br>and<br>Chemistry I | Physics<br>and<br>Chemistry I (If not<br>taken in 9 <sup>th</sup> grade)<br>or<br>AP Physics 1 | College in High School Chemistry<br>Advanced Chemistry<br>Advanced Biology<br>AP Physics 1<br>AP Physics 2<br>AP Physics C Mechanics |

## SCIENCE

| <u>COURSE NAME</u>      | <u>GRADE</u> | <u>CREDITS</u> |
|-------------------------|--------------|----------------|
| <b><u>BIOLOGY I</u></b> | 9            | 1              |

The purpose of this course is to provide each student with a working knowledge of biology, the life science. Biology I is a general survey/overview of the nature and continuity of life, cellular biology, genetics and heredity, diversity of life, microbiology, biotechnology, botany, zoology, human anatomy and physiology, and ecology. The practical application of the material and concepts learned occur through frequent laboratory activities/investigations (microscopy and dissections are stressed). The philosophy of this course is not only to prepare the college-bound student, but to benefit the student who will enter the working world also. Especially stressed in the course will be Eligible Content mastery for the Keystone Exam: Biology.

|   |        |    |
|---|--------|----|
| <b><u>**KEYSTONE CORE BIOLOGY I</u></b> | 10- 12 | .5 |
|---|--------|----|

Keystone Core Biology I is a required course for all students that are NOT successful at passing the Keystone Biology I exam. The course will reinforce all concepts that are included on the Keystone Biology I exam in order to achieve successful completion of the exam. These concepts will re-teach, strengthen, and expand students' knowledge of the Pennsylvania core science standards.

**\*\*Required if not proficient on the Keystone Biology I Exam\*\***

|                           |       |   |
|---------------------------|-------|---|
| <b><u>CHEMISTRY I</u></b> | 9- 12 | 1 |
|---------------------------|-------|---|

This class is designed to give students a confident grasp of the fundamental concepts of chemistry. Using algebraic skills to a significant degree, students will explore: The States of Matter, Atomic Structure, Periodic Trends, Chemical Reactions, Bond Theories, Nomenclature, Stoichiometry and the Gas Laws. Laboratory work and computer applications will be utilized to enrich student exploration.

Prerequisite: Algebra I Parts I **and** II with a "C" or better  
Teacher Recommendation  
Biology I (or taking concurrently with teacher recommendation)

|                       |        |   |
|-----------------------|--------|---|
| <b><u>PHYSICS</u></b> | 10- 12 | 1 |
|-----------------------|--------|---|

This is an introductory-level physics course designed to survey the significant topics in mechanics. This is meant to be a first year physics course. Conceptual understanding of the topics of Mechanics is emphasized. Although this course is not as focused on math as the AP courses, a significant amount of mathematical computation is required in any physics course. For this course, an understanding of Algebra 1 and simultaneous completion of geometry is sufficient. Students will learn the basic physics concepts in the areas of Kinematics, Vectors, Forces (Newton's Laws), Work, Energy, Conservation of Energy, Universal Law of Gravitation, Linear Momentum, Rotational Motion, Waves, Sound, and Electrostatics. Students will also learn the basic procedure for advanced scientific laboratory work, including how to present and interpret data in a lab report.

Prerequisite: Successful completion of Algebra 1; Concurrently taking Geometry or Algebra 2.

|                                     |            |   |
|-------------------------------------|------------|---|
| <b><u>EARTH SYSTEMS SCIENCE</u></b> | 10, 11, 12 | 1 |
|-------------------------------------|------------|---|

Earth Systems is a year-long course that is designed to continue investigations that began in Middle School Science and Biology. Students will discover the connections among the Earth's systems throughout Earth's history. These systems

(the atmosphere, hydrosphere, geosphere, and biosphere) interact through time to produce the Earth's landscapes, ecology, and resources. This course develops explanations of phenomena fundamental to the sciences of geology and physical geography including early history of the Earth, plate tectonics, landform evolution, and weather and climate.

Prerequisite: Teacher Recommendation

| <u>COURSE NAME</u>      | <u>GRADE</u> | <u>CREDITS</u> |
|-------------------------|--------------|----------------|
| <u>PHYSICAL SCIENCE</u> | 11, 12       | 1              |

This course will introduce general principles of both physics and chemistry. Physics topics will include measurement practices, characteristics of motion, Newton's laws of motion, concepts of energy, work and power, characteristics of heat, the structures and characteristics of waves, basics of optics, basic circuitry and other concepts in electricity and magnetism.

The Chemistry topics will include the structure of matter, states of matter, chemical bonding, naming of compounds, the characteristics of solutions and mixtures, basics of chemical reactions, characteristics of acids and bases, and basic carbon chemistry.

Prerequisite: Teacher Recommendation

|   |        |   |
|---|--------|---|
| <u>*ADVANCED BIOLOGY</u><br>Additional .25 quality points | 10- 12 | 1 |
|---|--------|---|

Advanced Biology is an *academic* course designed for those students who are planning a career or further study in the sciences beyond high school. The topics of Dendrology, Botany, Evolution, Taxonomy/Phylogeny, Zoology, Microbiology, Human Anatomy/Physiology, Ecology and Biotechnology/Advanced Genetics will be investigated (as time permits) in this course using a laboratory-oriented, problem-solving approach. Students will be involved in research projects/presentations, fieldwork, and data analysis. Students will participate in continued, more complex dissections and advanced microscopy.

Prerequisite: Biology I (With an average grade of B or above), Chemistry I, or Physics I  
Teacher Recommendation

|   |        |   |
|---|--------|---|
| <u>*ADVANCED CHEMISTRY</u><br>Additional .25 quality points | 10- 12 | 1 |
|---|--------|---|

Advanced Chemistry is a college preparatory course for those who plan on pursuing a science, engineering or medical related career. Students will employ the scientific method to perform laboratory experimentation.

Problem solving activities and a more in-depth approach will encourage students to go beyond the general chemistry courses previously completed. It is the goal of this course to give students the unique opportunity to learn a broader range of topics than previously offered in AP Chemistry. Topics will include: Materials of Technology, Reaction Kinetics, Chemical Equilibrium, Acids and Bases, Electrochemistry, Nuclear Chemistry, Organic Chemistry and Nanotechnology.

Prerequisite: Chemistry I and Algebra II  
Trigonometry (or taking concurrently)  
Teacher Recommendation

| <u>COURSE NAME</u>  | <u>GRADE</u> | <u>CREDITS</u> |
|---|--------------|----------------|
| <b><u>*COLLEGE IN HIGH SCHOOL CHEMISTRY</u></b><br>Additional .5 quality points | 10- 12       | 1              |

This is a first semester, college level chemistry course, which builds on the core knowledge acquired in Chemistry I. The course will follow the University of Pittsburgh's General Chemistry 110 curriculum. The student may elect to pay for 4 credits through the University of Pittsburgh, which will require students to visit the Oakland campus for laboratory assignments and a final exam. Concepts addressed in class will be reinforced through the development of appropriate scientific experiments in a lab setting and computer applications.

Prerequisite: Chemistry I & Algebra II  
Teacher Recommendation  
\*Summer work will be required

|   |            |   |
|---|------------|---|
| <b><u>*AP PHYSICS 1</u></b><br>Additional 1 quality point | 10, 11, 12 | 1 |
|---|------------|---|

This is an introductory, algebra-based course for students excelling in math and science. AP Physics 1 is designed to be taught over the course of a full academic year and may be taken as a 1<sup>st</sup> year physics course with no prior physics coursework necessary. This course does require the use of trigonometric functions; this understanding can be achieved in the math course or the AP Physics 1 course itself. Students will develop a deep understanding of foundational principles of physics in classical mechanics by applying these principles to complex physical situations that combine multiple aspects of physics rather than present concepts in isolation. Through inquiry based learning, students will develop critical thinking and reasoning skills, as defined by the AP science practices. AP Physics 1 courses focus on the Big Ideas typically included in the *first* semester of an algebra-based introductory college-level physics course and provide the students with enduring understandings designed to support future coursework in the sciences. ***Taking the AP Physics 1 Exam in May of the academic year is required.*** **Topics Covered in AP Physics 1:** The AP Physics 1 exam covers topics in mechanics, electricity, and waves (a single test score is reported). These topics include: Kinematics, Dynamics (Newton's Laws), Circular Motion, Universal Law of Gravitation, Simple Harmonic Motion, Impulse, Linear Momentum, Conservation of Momentum, Collisions, Work, Energy, Conservation of Energy, Torque, Rotational Motion, Angular Momentum, Electrostatics, DC Resistors, Mechanical Waves, and Sound.

Prerequisite: Successful completion of Geometry & completion of (or concurrently taking) Algebra 2.

|   |        |   |
|---|--------|---|
| <b><u>*AP PHYSICS 2</u></b><br>Additional 1 quality point | 11, 12 | 1 |
|---|--------|---|

This is a 2<sup>nd</sup> year, algebra-based physics course for students excelling in math and science. AP Physics 2 is designed to be taught over the course of a full academic year and should be taken as a 2<sup>nd</sup> year course after students have completed AP Physics 1 or similar introductory course. Students will develop a deep understanding of foundational principles of physics in classical mechanics and modern physics by applying these principles to complex physical situations that combine multiple aspects of physics rather than present concepts in isolation. Through inquiry based learning, students will develop critical thinking and reasoning skills, as defined by the AP science practices. AP Physics 2 courses focus on the Big Ideas typically included in the *second* semester of an algebra-based introductory college-level physics course and provide the students with enduring understandings designed to support future coursework in the sciences. ***Taking the AP Physics 2 Exam in May of the academic year is required.***

**Topics Covered in AP Physics 2:** The AP 2 exam covers topics in the following areas, again with a single score being reported: Thermodynamics, Kinetic Theory, Fluid Statics and Dynamics, Electrostatics (Electric force, Electric Field, Electric Potential), DC Circuits, Steady-state RC Circuits, Magnetism, Induction, Geometric and Physical Optics, Atomic Physics, Nuclear Physics, and Quantum Physics.

Prerequisite: Successful completion of AP Physics 1 or comparable introductory course.  
Successful completion of (or concurrently taking) Pre-Calculus.

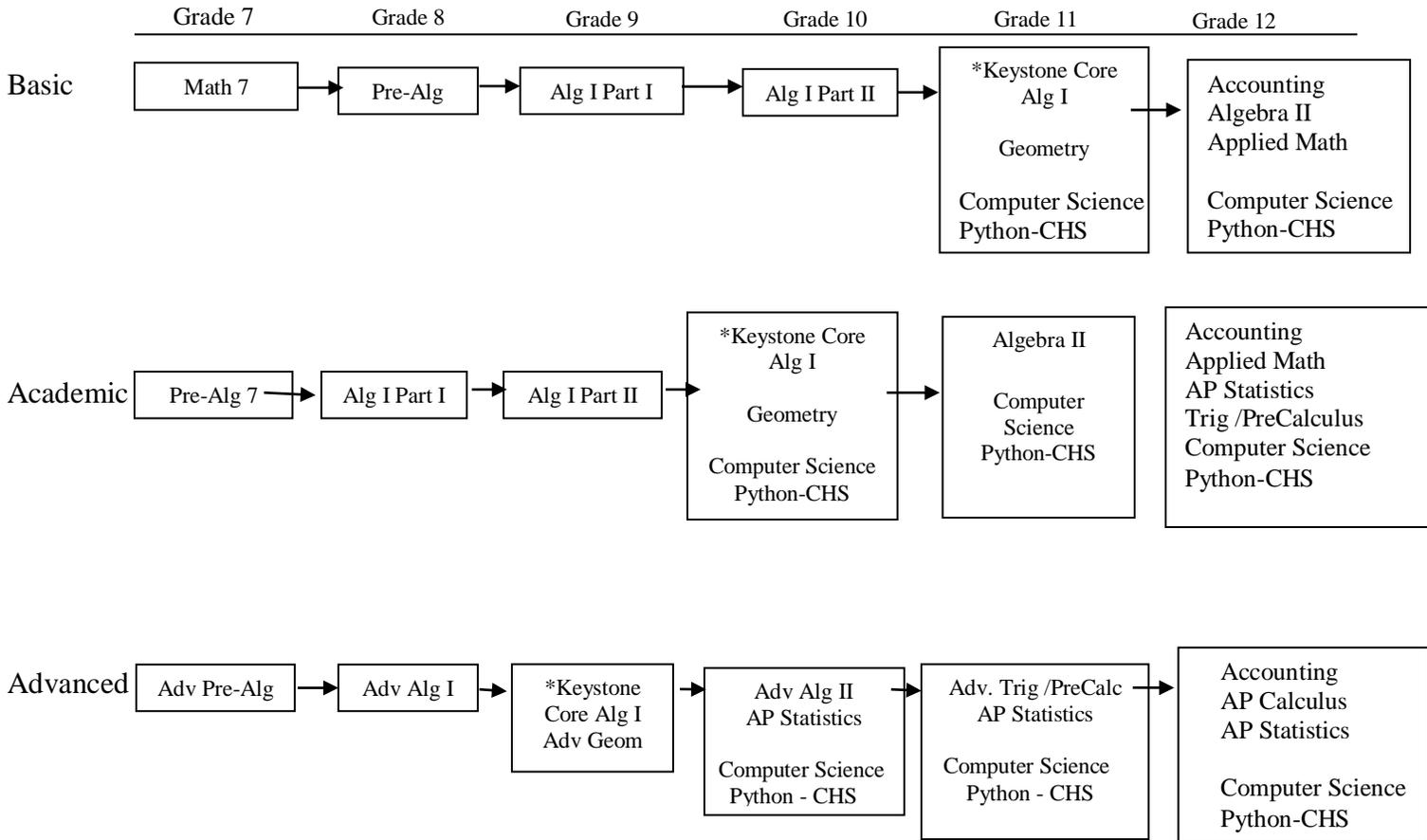
| <u>COURSE NAME</u>  | <u>GRADE</u> | <u>CREDITS</u> |
|---|--------------|----------------|
| <b><u>*AP PHYSICS C MECHANICS</u></b><br>Additional 1 quality point | 11, 12       | 1              |

AP Physics C Mechanics is equivalent to a one-semester, Calculus-based, college-level physics course, especially appropriate for students planning to specialize or major in physics, physical science or engineering. Introductory differential and integral calculus is used throughout the course. Students will use methods of differential and integral calculus to formulate physical principles and solve complex physical problems. Topics for study in this course are similar to those in AP Physics 1. It should be noted that fewer topics may be covered in Physics C, but they are covered in greater depth and with greater analytical and mathematical sophistication. *Students are required to take the AP Physics C Mechanics Exam in May of the academic year.* Also available to students of AP C Mechanics is the option to take this course concurrently as a College in High School (CHS) course, run through the University of Pittsburgh. It is designed to be taught over 1 full academic year and is equivalent to a 1<sup>st</sup> semester Calculus-based college-level physics course. College-level exams and college credit (through the University of Pittsburgh) can be earned if the student enrolls through the CHS Program (there is a fee assessed for college credit). Three major exams and a final exam are administered through the CHS program. Course topics are identical to the topics covered in the AP C Mechanics course, allowing the course to be taught as a dual enrollment course.

**Topics Covered in AP C Mechanics:** Kinematics, Work, Energy, Power, Newton's Laws, Systems of Particles, Linear and Angular Momentum, Circular Motion, Rotation, Torque, Oscillation, Gravitation, Mechanical Waves, and Kinetic Theory of Gasses.

Prerequisite: Successful completion of a high school laboratory science course.  
Successful completion of a 2<sup>nd</sup> year Algebra Course, including Trigonometry.  
Successful completion of (or taking concurrently) a Calculus course.

## Teacher Recommended Math Sequence



\*Keystone Core Algebra I: Required if unsuccessful completion of Keystone exam.

Math Electives:

This course will be awarded a Math credit when taken in the senior year, but may be doubled-up with other Math classes prior to the senior year.

Accounting I

Applied Math

## MATHEMATICS

| <u>COURSE NAME</u>      | <u>GRADE</u> | <u>CREDITS</u> |
|-------------------------|--------------|----------------|
| <u>ALGEBRA I PART I</u> | 9            | 1              |

This course will begin with a review of arithmetic and pre-algebra concepts. Traditional algebraic topics will then be taught in depth so that each student can master these concepts. This class will prepare the student for Algebra I Part II.

Prerequisite: Pre-Algebra / Teacher Recommendation

|                          |       |   |
|--------------------------|-------|---|
| <u>ALGEBRA I PART II</u> | 9, 10 | 1 |
|--------------------------|-------|---|

This course is a continuation of algebraic topics and introduces geometry. Basic and intermediate algebra concepts are stressed to strengthen the student's mathematical foundation. The students will explore these topics by traditional textbook instruction that reinforces and expands on what was learned in Algebra I Part I

Prerequisite: Algebra I Part I

|                 |       |   |
|-----------------|-------|---|
| <u>GEOMETRY</u> | 10-12 | 1 |
|-----------------|-------|---|

Geometry continues to develop the algebraic and geometric concepts introduced in Algebra, with special emphasis on coordinate geometry. Concepts of logic are more fully explored. Properties of triangles, quadrilaterals, and other polygons are analyzed.

Prerequisite: Algebra I Part II

|                           |   |   |
|---------------------------|---|---|
| <u>*ADVANCED GEOMETRY</u> | 9 | 1 |
|---------------------------|---|---|

Additional .25 quality points

Advanced Geometry continues to develop the algebraic and geometric concepts introduced in Advanced Algebra I, with special emphasis on coordinate geometry. Fundamental concepts of points, lines, and angles are covered. Logical reasoning is fully explored and directly applied to algebraic and geometric proofs. Properties of geometric shapes are explored in terms of congruence, similarity, area, surface area, and volume. This advanced course is intended for students with above average mathematical and problem solving skills. Assignments will include substantial work with the skills and concepts presented in the lesson, more complex applications, and challenging exercises.

Prerequisite: Advanced Algebra I  
Teacher Recommendation

Recommended: B average

|                                |           |    |
|--------------------------------|-----------|----|
| <u>KEYSTONE CORE ALGEBRA I</u> | 9, 10, 11 | .5 |
|--------------------------------|-----------|----|

Keystone Core Algebra I is a required course for all students that are NOT successful at passing the Keystone Algebra I exam. The course will reinforce all concepts that are included on the Keystone Algebra I exam in order to achieve successful completion of the exam. These concepts will re-teach, strengthen, and expand students' knowledge of the Pennsylvania core mathematics standards.

**\*\*Required if not proficient on the Keystone Algebra I Exam\*\***

| <u>COURSE NAME</u>       | <u>GRADE</u> | <u>CREDITS</u> |
|--------------------------|--------------|----------------|
| <b><u>ALGEBRA II</u></b> | 11, 12       | 1              |

Algebra II continues to build upon basic algebra concepts taught in Algebra I Part I and Algebra I Part II. Throughout the year algebraic concepts are extended to include higher level problems that include the complex number system, exponents and radicals.

Prerequisite: Algebra I Part II or Advanced Algebra I & Geometry  
Teacher Recommendation

|   |    |   |
|---|----|---|
| <b><u>*ADVANCED ALGEBRA II</u></b><br>Additional .25 quality points | 10 | 1 |
|---|----|---|

Advanced Algebra II continues to build upon the foundations of algebra and geometry developed in the Advanced Algebra I courses. The concept of function is introduced and integrated throughout the course. Algebraic concepts are extended to include simplifying polynomials, the complex number system and rational, exponential and logarithmic functions.

Prerequisite: Advanced Geometry  
Teacher Recommendation  
Recommended: B average

|  |        |   |
|--|--------|---|
| <b><u>TRIGONOMETRY/ PRE-CALCULUS</u></b> | 11, 12 | 1 |
|--|--------|---|

This course begins with a review of Algebra II skills, moves on to Pre-Calculus, then completes the year with a study of Trigonometry. Students will study linear, quadratic, polynomial, radical, rational, power, exponential and logarithmic functions and their inverses, learning algebraic, numeric, and graphic techniques for analysis and understanding. Trigonometric topics include radian and degree measure, right triangle trigonometry, general definitions and functions of any angle, Unit Circle and identities and applications.

Prerequisite: Geometry, Algebra II, B average or better in all math classes  
Proficient or Advanced on Keystone Algebra I test

|  |    |   |
|--|----|---|
| <b><u>ADVANCED TRIGONOMETRY/ PRE-CALCULUS</u></b><br>Additional .25 quality points | 11 | 1 |
|--|----|---|

This course assumes proficiency in Algebra II skills and jumps into Pre-Calculus topics including a study of polynomial, radical, rational, power, absolute value, exponential and logarithmic functions and their inverses. Trigonometric concepts include radian and degree measure, right triangle trigonometry, general definitions and functions of any angle, Unit Circle, inverse functions, identities (including double and half angle), graphs and translations of functions, Laws of Sine and Cosine, and application problems. Sequences and series, conic sections, polar coordinate system and parametric equations are also included. An introduction to Limits completes the year. This is a rigorous and fast-paced study of topics to prepare students for AP Calculus AB.

Prerequisite: Advanced Geometry, Advanced Algebra II, B average or better in all math classes.  
Advanced on Keystone Algebra I test  
Teacher Recommendation

| <u>COURSE NAME</u> | <u>GRADE</u> | <u>CREDITS</u> |
|--------------------|--------------|----------------|
| <u>AP CALCULUS</u> | 12           | 1              |

\*Additional 1 quality point

This course is designed for those students with superior motivation and ability in mathematics who plan to attend a college or university. This course is the standard first course in a basic calculus sequence required for all mathematics, science, engineering, and statistics students. Topics covered in this course include functions and graphs, limits, derivatives, trigonometric functions, application of the derivative, integral, applications of the integral, and exponential and logarithmic functions. AP College Calculus is primarily concerned with the student's understanding of the concepts of college-level calculus and providing an in-depth experience with its methods and application. It is a challenging and demanding course intended to fully prepare the student for the College Board's Calculus AB Examination. This course is also offered as a 4-credit College in High School Class through the University of Pittsburgh.

Prerequisites: Students must earn a **minimum B average** grade in Adv. Trig/Pre-Calculus  
Department recommendation

|                     |        |   |
|---------------------|--------|---|
| <u>ACCOUNTING I</u> | 10- 12 | 1 |
|---------------------|--------|---|

Accounting I introduces the student to the orderly procedures of the accounting cycle and to specific problem solving within that cycle. Students will use Microsoft Excel and tax preparation software (Federal, State, and Local). In addition, this course will offer analysis of company portfolio, payroll, stock, bankruptcy laws, debt ratio, tax, profit margin, and inventory turnover rate. This is a valuable course for anyone planning to enter the workforce after high school or college. One third of all college majors choose careers in marketing/sales, banking, insurance, real estate, law, financial management or accounting. **\*This course will be awarded a Math credit only when taken in the senior year.**

|                            |    |   |
|----------------------------|----|---|
| <u>APPLIED MATHEMATICS</u> | 12 | 1 |
|----------------------------|----|---|

Applied Math is a consumer awareness class that has students in grade 12 prepare for the adult world of consumer topics, number theory review, wages, taxes, commission, checking & savings accounts, loans, vehicle transportation, mortgages, insurance, investments, and preparing a budget are the many units in the applied math curriculum. Students will see "The Worth" of studying such topics and better prepare themselves to be an informed adult consumer.

**\*This course will be awarded a Math credit only when taken in the senior year.**

Prerequisite: Teacher Recommendation

|                      |            |   |
|----------------------|------------|---|
| <u>AP STATISTICS</u> | 10, 11, 12 | 1 |
|----------------------|------------|---|

\*Additional 1 quality point

This full-year course follows the same syllabus as the Advanced Placement Testing Service and is designed for the student who wishes to study statistics and related topics at an accelerated pace comparable to courses in colleges and universities. Students have the *option* of registering with the University of Pittsburgh for four (4) college credits and will then be required to pay a fee. Some of the topics taught include: data collection and description, frequency distributions,

counting techniques, probability, probability distributions, the Normal Distribution, confidence intervals and sample size, hypothesis testing, correlation and regression, chi-square tests, and analysis of variance.

Prerequisite: Grade of “C” or higher in Advanced Algebra II, “B” or higher in Algebra II or Department recommendation

**COMPUTER SCIENCE PYTHON – CHS**

10,11, 12

1

\*Additional .5 quality points

**This course in computer science is at the Collegiate Level.** The objectives of this course are to use the computer in an interactive environment to analyze problems, to develop algorithms, to learn the Python language, to design code and to document programs using techniques of good programming. Students may elect to take this course for three (3) college credits through the University of Pittsburgh.

Prerequisite: Algebra I Part II, or Advanced Algebra I / Teacher Recommendation

**WELLNESS**

| <b><u>COURSE NAME</u></b>              | <b><u>GRADE</u></b> | <b><u>CREDITS</u></b> |
|--|---------------------|-----------------------|
| <b><u>WELLNESS</u></b><br>(1 Semester) | 9- 12<br>(Required) | .5                    |

Wellness is a combination of physical and health education. Wellness meets daily for one semester for students in grades 9-12. Emphasis will be placed on overall health and well-being in both the classroom and during physical activities. Students will be encouraged to participate in various strength and cardio respiratory training activities. Also, students will participate in individual, team, and lifetime sports. The primary content will start with the Health Triangle. The triangle consists of physical, mental and social components. Students will be presented material on healthy food options, exercise, relationships, and abstinence from drugs and alcohol in various ways. This information will help students form favorable habits now and understand the importance of achieving optimal health and fitness levels in the present and future. Our goal is to arm students with information to make smart decisions with regards to their physical, mental/emotional, and social health. Achieving over all well-being will allow students to live a higher quality of life now and in the future.

Prerequisite: None

## FOREIGN LANGUAGE

### COURSE NAME

### GRADE

### CREDITS

#### FRENCH I

9-12

1

French I is an introduction to the language and culture of French speaking countries. Students will learn basic conversation, vocabulary, and grammatical structures, and will be expected to develop skills in speaking, reading, writing, and oral comprehension, as well as become able to appreciate other cultures.

Prerequisite: None

Recommended: C or above in English or Exploratory Language

#### FRENCH II

10-12

1

French II is a continuation of grammar and culture from French I. Students will be working toward ever increasing creative language expression. Students will further build upon skills in the areas of speaking, reading, writing, oral comprehension, and cultural awareness. Excerpts from French literature will be read and discussed.

Prerequisite: French I

Recommended: C or above in French I

#### FRENCH III-CHS

11, 12

1

French III is a continuation of grammar and culture from French II. In addition, more time will be devoted to reading than in the previous two levels. Students will work toward increased oral proficiency. Literature and art, taught in the target language will be introduced in the second semester. All students will keep a personal journal.

Prerequisite: French II

Recommended: C or above in French II

#### FRENCH IV-CHS

12

1

Students will expand upon the knowledge and skills already developed in French I, II, and III. Students will also read various literary and journalistic selections, and will make oral and written presentations.

Prerequisite: French III

Recommended: C or above in French III

**COURSE NAME****GRADE****CREDITS****SPANISH I**

9- 12

1

Spanish I is an introduction to the Spanish language and culture. Students will learn basic conversation, vocabulary and verb conjugation. They are expected to be able to read, write, comprehend and converse in Spanish.

Prerequisite: None

Recommended: C or above in English or Exploratory Language

**SPANISH II**

10-12

1

Spanish II is a continuation of grammar and culture from Spanish I. The focus is on the present and past tenses. Students will be asked to create/perform dialogs in the target language, read selected cultural stories, and discuss/write about daily activities as well as past events in order to build their listening, oral, reading and writing comprehension skills. A few excerpts from major literary works will also be read and discussed.

Prerequisite: Spanish I

Recommended: C or above in Spanish I

**SPANISH III-CHS**

11, 12

1

Spanish III is a continuation of grammar, culture, and literature from Spanish II. The students will focus on several verb tenses. Students will read and discuss short stories in the target language, write compositions, give individual and group presentations on several cultural topics and role-play. A few excerpts from major literacy works will be used for building reading comprehension skills and class discussion. The class will be conducted primarily in the target language.

Prerequisite: Spanish II / Teacher Signature Required for CHS

Recommended: C or above in Spanish II

**SPANISH IV-CHS**

12

1

Spanish IV will be a continuation of grammar from Spanish I, II, III with an emphasis on conversation. Students will read a short story and write in the target language. Projects and presentations will also be required. Furthermore, culture and literature will be utilized as a tool for conversation.

Prerequisite: Spanish III / Teacher Signature Required for CHS

Recommended: C or above in Spanish III

## COMPUTER TECHNOLOGY

### COURSE NAME

### GRADE

### CREDITS

#### COMPUTER APPLICATIONS I

9- 12

1

Computer Applications I is designed to provide students practical applications of computer software through “hands-on” instruction. The student will become familiar with the use of the computer as a tool for both work and personal applications, computer related careers, and computer terminology. Course content will also include understanding hardware, software, operating systems and care/operations. The practical approach to software includes: Word Processing; Spreadsheets; Desktop Publishing; and PowerPoint Presentations.

#### COMPUTER APPLICATIONS II / WEB DESIGN

10- 12

1

Computer Applications II will introduce advanced principles in current software. Hands-on experience with the computer will include Internet research activities and advanced applications that integrate Microsoft Office<sup>®</sup> Word, Excel, Power Point, Access, and Publisher software. Students will learn complex techniques such as merging, graphing, global search and replace, creating spreadsheets and charts using formulas, database management and sophisticated research and presentation projects utilizing desktop publishing skills.

Web Design will give students a working knowledge of Adobe Dreamweaver through hands-on experience. They will have the opportunity to create Web sites that include various student interests such as sports, club activities, drama productions, creative writing, and more. Students will produce all of the content for their Web sites by writing, revising, editing the text, and taking accompanying photographs. Students will be developing technology and design skills.

Prerequisite: Computer Applications I

## TECHNOLOGY

| <u>COURSE NAME</u> | <u>GRADE</u> | <u>CREDITS</u> |
|--------------------|--------------|----------------|
|--------------------|--------------|----------------|

|                                     |       |   |
|-------------------------------------|-------|---|
| <b><u>DESIGN – BUILD - TEST</u></b> | 9- 12 | 1 |
|-------------------------------------|-------|---|

Students will use problem solving and critical thinking skills along with math and science skills to develop, plan, draw and implement engineered solutions to problems. Students will build models and prototypes using laboratory tools and machines, CNC machines, and laser engraving and cutting. Prototypes will be tested by in-class competitions. A variety of STEM related careers will be explored.

Prerequisite: None

|  |       |   |
|--|-------|---|
| <b><u>ADVANCED DESIGN – BUILD - TEST</u></b> | 10-12 | 1 |
|--|-------|---|

Students will demonstrate the application and design processes of engineering. Students will form engineering teams and create and select a design, models and address specific engineering problems. Teams will use communications, graphics, mathematics and community resources to solve problems. Students will work with all laboratory fabricating equipment (wood, metal, and plastic), 3-D CADD design, 3-D printing, laser engraving, robotics systems (vehicle electrical, structural, mechanical drive train, and remote control systems) and have the opportunity to participate in engineering competitions.

Prerequisite: Design–Build–Test and Engineering-Manufacture-Construct

|  |       |   |
|--|-------|---|
| <b><u>ENGINEER – MANUFACTURE - CONSTRUCT</u></b> | 9- 12 | 1 |
|--|-------|---|

Students will learn the fundamentals of manufacturing technology and develop an understanding of how things are made. Introduction to manufacturing tools and machines, their operation, CNC machining, developing bill of materials, along with reading plans are all topics that will be introduced in an activity-based curriculum. All students will complete a custom project by turning raw materials into finished products,

Prerequisite: None

|   |        |   |
|---|--------|---|
| <b><u>ENGINEER – MANUFACTURE – CONSTRUCT II</u></b> | 10- 12 | 1 |
|---|--------|---|

Students will gain competence and self-confidence through the integration of designing, manufacturing and constructing advanced products. This course provides students with the opportunity to study tools, materials and processes used in manufacturing and construction today. Students will experience building pieces of furniture with opportunities to work on construction products. Designing, researching cost estimating, CNC machining, researching and development, financing, and production and marketing are all concepts that will be introduced through an activity-based curriculum.

Prerequisite: Engineer-Manufacture-Construct

## FAMILY & CONSUMER SCIENCES

| <u>COURSE NAME</u> | <u>GRADE</u> | <u>CREDITS</u> |
|--------------------|--------------|----------------|
|--------------------|--------------|----------------|

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|-------------------------|-------|---|
| <u>FOOD PREPARATION</u> | 9- 12 | 1 |
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Students will perform hands-on, problem solving activities related to nutrition, meal planning and consumer skills. This basic course includes nutrition, basic meal planning, food preparation, and buying skills in its relation to foods.

Prerequisite: Teacher recommendation for 9th graders

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| <u>FOOD PREPARATION II</u> | 10-12 | 1 |
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Students will be involved in laboratory activities and group projects that focus a nutritionally balanced diet. This advanced laboratory course includes cultural influences on food, dietary needs for various age groups and principles of weight control. Advanced meal planning, preparation, management, consumer buying, and nutrition are studied.

Prerequisite: C or above in Food Prep.

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| <u>FASHION ARTS</u> | 9- 12 | 1 |
|---------------------|-------|---|

The Fashion Arts course will provide students with the opportunity to learn the principles of fashion history, fashion and sewing (hand and machine). Students will apply their knowledge of art & fashion, designing and constructing their own final projects. Students will learn how to operate a sewing machine, read and follow a pattern, and select fabrics and notions. Upon mastery of each skill, students will submit projects for evaluation. Students will be required to supply some of their own materials.

Prerequisite: None

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|---------------------------|------------|---|
| <u>INDEPENDENT LIVING</u> | 10, 11, 12 | 1 |
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This course begins with a self-evaluation and includes establishing future goals. The course content includes preparing for a job interview, renting a house, buying a car, balancing a checkbook, using credit, and understanding family and marriage relations. Classroom projects, speakers, and instruction materials will be included to help prepare students for daily living.

## MUSIC

### COURSE NAME

### GRADE

### CREDITS

#### BAND

9- 12

5 periods = 1

Participation in band is designed to develop leadership, physical and mental skills, and musicianship through instrumental band performance. A challenge and tryout system provides opportunities for recognition of individual accomplishment. Opportunities to perform at county, district, regional and state band and orchestra festivals are available. Band membership is determined by the director's evaluation of the student's ability to perform on their instrument. It is mandatory for an instrumentalist to schedule Band to participate in the Marching Band. Grade evaluation will be determined by performance, conduct, attitude and attendance at all required rehearsals and performances, throughout the year, in various musical settings and experience music through active participation.

Prerequisite: Director's evaluation

#### CONCERT CHOIR

9- 12

5 periods = 1

The student will learn to sing in four-part harmony and to appreciate good choral music from all periods of choral writing. Solo, small ensemble and full ensemble experiences are given. Performance experience is gathered through participation in school assemblies, community programs, public concerts, county, district, regional, honors, and state festivals. Grade evaluation will be determined by performance, conduct, attitude and attendance at all required performances and rehearsals.

Prerequisite: Director's evaluation

#### JAZZ ENSEMBLE

9- 12

5 periods = 1

Students enrolling in this course will be exposed to a variety of jazz and popular styles of music. Music theory as it relates to chord structure, rhythm and melody indigenous to this type of music will be discussed and applied. Improvisational techniques will be discussed and applied. Grade evaluation will be determined based on performance, attendance at rehearsals and performances, attitude and improvement throughout the scholastic year. Students must be enrolled in Band to participate in this ensemble unless band members do not provide ample instrumentation. Selection for this ensemble will be by audition and/or director selection.

Prerequisite: Teacher recommendation

## ART

| <u>COURSE NAME</u> | <u>GRADE</u> | <u>CREDITS</u> |
|--------------------|--------------|----------------|
|--------------------|--------------|----------------|

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|--------------|-------|---|
| <u>ART I</u> | 9- 12 | 1 |
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This is the first in a sequence of art courses, which will provide students with a series of concentrated, hands-on experiences related to the visual fine arts. Students will be involved in a series of teacher-designed studio activities focusing on the basic fundamentals in design, color, drawing, sculpture, and graphics. Students will be introduced to a basic art history survey.

Prerequisite: None

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| <u>ART II</u> | 10- 12 | 1 |
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This is the second in a sequence of art courses, which will provide students with a series of hands-on experiences related to the visual fine arts. Students will be provided with the opportunity to explore more advanced techniques in painting and drawing along with sculpture and graphics. Art history will be covered.

Prerequisite: Art I  
Recommended: C average in Art I

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|----------------|--------|---|
| <u>ART III</u> | 11, 12 | 1 |
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This is the third in a sequence of art courses, which will provide students with hands on experiences in studio activities. Emphasis will be placed on the student to develop and refine the techniques they have learned in the previous course in the areas of design, painting, drawing sculpture and crafts. Students will be required to do one research paper in the area of Art History.

Prerequisite: Art II  
Recommended B average in Art II

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|---------------|----|---|
| <u>ART IV</u> | 12 | 1 |
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This is the fourth in a sequence of art courses, which will provide the student with hands-on experiences in studio activities. This course is geared primarily for the student who has a strong interest in pursuing an art career after high school and has maintained a “B” average in Art III.

Prerequisite: Art III  
Recommended: B average in Art III

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|--------------------|------|---|
| <u>3D MODELING</u> | 9-12 | 1 |
|--------------------|------|---|

Learn the 3D modeling techniques used in movies, visual effects, video games, cartoons, commercials, and animation! Using 3DS Max, you will work in this highly skill-based art form to manipulate and sculpt pre imagination into substantial forms. By the end of the course, you will have developed a portfolio of original projects that you can use when applying for an internship, higher education, or a job.