

Chartiers-Houston School District



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

COURSE SELECTION BOOKLET

2020 - 2021

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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 2020-2021 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)

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.

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 QUALIFIED 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.

COURSE NAME

GRADE

CREDITS

ENGLISH 9

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 21st Century learning for all post-secondary endeavors

ENGLISH 10

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 21st Century learning for all post-secondary endeavors.

ENGLISH 11

11

1

Microsoft 365 will be integrated in class to allow students to incorporate 21st 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.

ENGLISH 12

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 21st Century learning for all post-secondary endeavors

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.

***ADVANCED ENGLISH 9**

9

1

Additional .25 quality points

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 21st 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

***ADVANCED ENGLISH 10**

10

1

Additional .25 quality points

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 21st 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

***ADVANCED PLACEMENT ENGLISH LANGUAGE & COMPOSITION**

11, 12

1

Additional 1 quality point

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. Materials will be distributed to students near the end of the current school year.***

Prerequisite: Department recommendation
"B" average in their previous English course

***ADVANCED ENGLISH 12**

12

1

Additional .25 quality points

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 21st 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

***ADVANCED PLACEMENT
ENGLISH LITERATURE & COMPOSITION**

11, 12

1

Additional 1 quality point

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

JOURNALISM I

9-12

.5

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.

***This course does not fulfill an English requirement**

JOURNALISM II

9-12

.5

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.

***This course does not fulfill an English requirement**

THEATER

9-12

.5

This course is designed to give students an overview of theater arts with an emphasis in performance. Students will be introduced to topics in the history of western theater, the roles in the theater, types of stages, ways of analyzing text, and theater terms. In addition, students will practice physical and vocal techniques to improve their performance abilities. Students will be expected to complete individual assignments as well as work in ensemble with their peers. All students will perform scenes and monologues and will participate to their full ability in class activities.

***This course does not fulfill an English requirement**

FILM ANALYSIS

9-12

.5

This course is designed to introduce the student to the elements of cinematic art through analysis of critically acclaimed films. Students will learn to view film as a literary work with respect to authorship, setting, character, plot, theme, symbolism and cultural significance. Students will participate in listening and speaking activities including class discussions, informal responses, formal presentations and projects. Students will also learn the basics of film analysis such as cinematic editing and camera angles. More than just a class for movie watching, this course is designed for those who want to learn about analyzing film.

***This course does not fulfill an English requirement**

CREATIVE WRITING

9-12

.5

This course is designed for students who enjoy writing as a form of art and personal expression. In this course, students will explore the elements of numerous literary genres (short fiction, poetry, drama, and film) and the power of both print and multimedia formats. Students will create original forms of descriptive writing, poetry, drama and fiction. Vocabulary development, creative writing techniques and skills are explored. Students will be encouraged to publish written work through a variety of online sources. Students would contribute original articles to the school newspaper.

***This course does not fulfill an English requirement**

MYTHOLOGY

9-12

.5

This course will center on a foundation in ancient mythology, focusing on Greek and Roman myths. Discussion may also cover Norse, Irish, Chinese myths, among others. Emphasis is on examining various classical myths as expressed through plays, poems, and stories. The objective is to demonstrate an understanding of the differences between myths, legends, and other similar genres and show how classical world mythology still influences contemporary society. This course will require reading, writing, and speaking skills.

***This course does not fulfill an English requirement**

PUBLIC SPEAKING / DEBATE

9-12

.5

This course is an introduction to speech communication, which emphasizes the practical skill of public speaking, including techniques to lessen speaker anxiety, and the use of visual aids to enhance speaker presentations. Public speaking is an essential part of the workforce today and everyday life. This course's goal is to prepare students for success in typical public speaking situations and to provide them with the basic principles of organization and research needed for effective speeches. The students will practice and be evaluated on the following public speaking criteria: Volume, Inflection, Poise/Posture, Eye Contact, and Rate (V.I.P.E)

***This course does not fulfill an English requirement**

SAT / ACT PREP ENGLISH

10, 11

.5

The SAT/ACT Prep course concentrates on SAT/ACT reading, vocabulary and writing skills. The course includes practice in taking the SAT test, as well as strategies for the question types (sentence completion, vocabulary, critical reading, and writing – finding errors / revision). The course will focus on the new SAT test, using a variety of sources as well as to focus on classroom reading, vocabulary, grammar lessons and practice tests.

***This course does not fulfill an English requirement**

SOCIAL STUDIES

COURSE NAME

GRADE

CREDITS

AMERICAN CULTURES I

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.

AMERICAN CULTURES II

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

AMERICAN CULTURES III

11, 12

.5

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

LAW

10-12

.5

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 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.

WORLD CULTURES

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

ECONOMICS

10-12

.5

Students will engage in the study and application of economics principles using textbooks, workbooks, newspapers and multimedia. 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.

PSYCHOLOGY

11, 12

.5

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.

AMERICAN GOVERNMENT / CIVICS

9-12

.5

American Government / Civics is a course designed to educate students about the U.S. Government. Students will study topics that include: The Application of the Constitution to the current day, court cases that have shaped the government, political ideologies, interests groups, public opinion, and how the media influences our society. The class will deepen the basic knowledge students have about our country, and is intended for those that have an interest in government, the Constitution, and politics.

WORLD WAR II

11, 12

.5

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

EMERGING WORLD

9-12

.5

Students in this course will examine contemporary issues facing the world today. The course will focus on investigating topics, evaluating sources and formulating arguments regarding current events while looking at the historical framework. Students will engage in civil discourse to become literate about the world around them as well as learning the value of different opinions, while reinforcing them with facts and resources.

***ADVANCED PLACEMENT UNITED STATES HISTORY**

11, 12

1

Additional 1 quality point

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 2020-2021.

Prerequisite: Test scores / Teacher recommendation

***ADVANCED PLACEMENT U.S. GOVERNMENT & POLITICS**

11, 12

1

Additional 1 quality point

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 2020-2021.

Prerequisite: Test scores / Teacher recommendation

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 th grade | 10 th grade | 11 th or 12 th grade-Select one |
|-----------------------|------------------------|--|
| Biology I | Earth Systems Science | Chemistry I or Physics or Physical Science |

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

| 9 th grade | 10 th grade | 11 th grade | 12 th |
|-----------------------|---|---|---|
| Biology I | Earth Systems Science or Chemistry I or Physics or AP Physics 1 | Chemistry I or Physics or Earth Systems Science or Physical Science | Chemistry I or Physics or Earth Systems Science or Physical Science |

Suggested sequence for the College Bound Science student:

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

SCIENCE

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

| | | |
|-------------------------|---|---|
| <u>BIOLOGY I</u> | 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.

| | | |
|---------------------------|-------|---|
| <u>CHEMISTRY I</u> | 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)

| | | |
|-----------------------|--------|---|
| <u>PHYSICS</u> | 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.

| | | |
|-------------------------------------|--------|---|
| <u>EARTH SYSTEMS SCIENCE</u> | 10- 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

PHYSICAL SCIENCE

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

*ADVANCED BIOLOGY

10- 12

1

Additional .25 quality points

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

ORGANIC CHEMISTRY

10-12

.5

Organic Chemistry is a semester course designed for students who plan to pursue a career in the science, engineering or health-related fields. This course is an introduction to the chemistry of carbon compounds which will include naming and drawing organic molecules based on the IUPAC rules (including functional groups and stereochemistry), and reactions including addition, substitution, polymerization, esterification, fermentation, saponification and combustion.

***This course does not fulfill science requirement**

Prerequisite: Chemistry I
Teacher Recommendation

ANATOMY

10-12

.5

This semester course will cover the structure and function of each of the human body's main systems. Systems covered will include skeletal, muscular and fascia, blood and circulatory, nervous, digestive, reproductive, urinary and excretory, lymphatic and immune, and endocrine. This course will focus on gross structure and function only, excluding most physiology.

***This course does not fulfill science requirement**

Prerequisite: Students enrolling in this course must first complete Biology I AND Chemistry I

BOTS ROBOTICS

9-12

.5

This course will include construction and programming of processor controlled, programmable, autonomous robots. Basic electronic components and function will be covered to begin the course. Once assembled, the robots will be programmed using the pBasic programming language. The course will include multiple projects to program the robots to perform tasks and respond to external conditions.

***This course does not fulfill science requirement**

***COLLEGE IN HIGH SCHOOL CHEMISTRY**

10- 12

1

Additional .5 quality points

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

***ADVANCED PLACEMENT PHYSICS 1**

10-12

1

Additional 1 quality point

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 1st 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.

***ADVANCED PLACEMENTS PHYSICS 2**

11, 12

1

Additional 1 quality point

This is a 2nd 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 2nd 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.

***ADVANCED PLACEMENT PHYSICS C MECHANICS**

11, 12

1

Additional 1 quality point

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 1st 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.

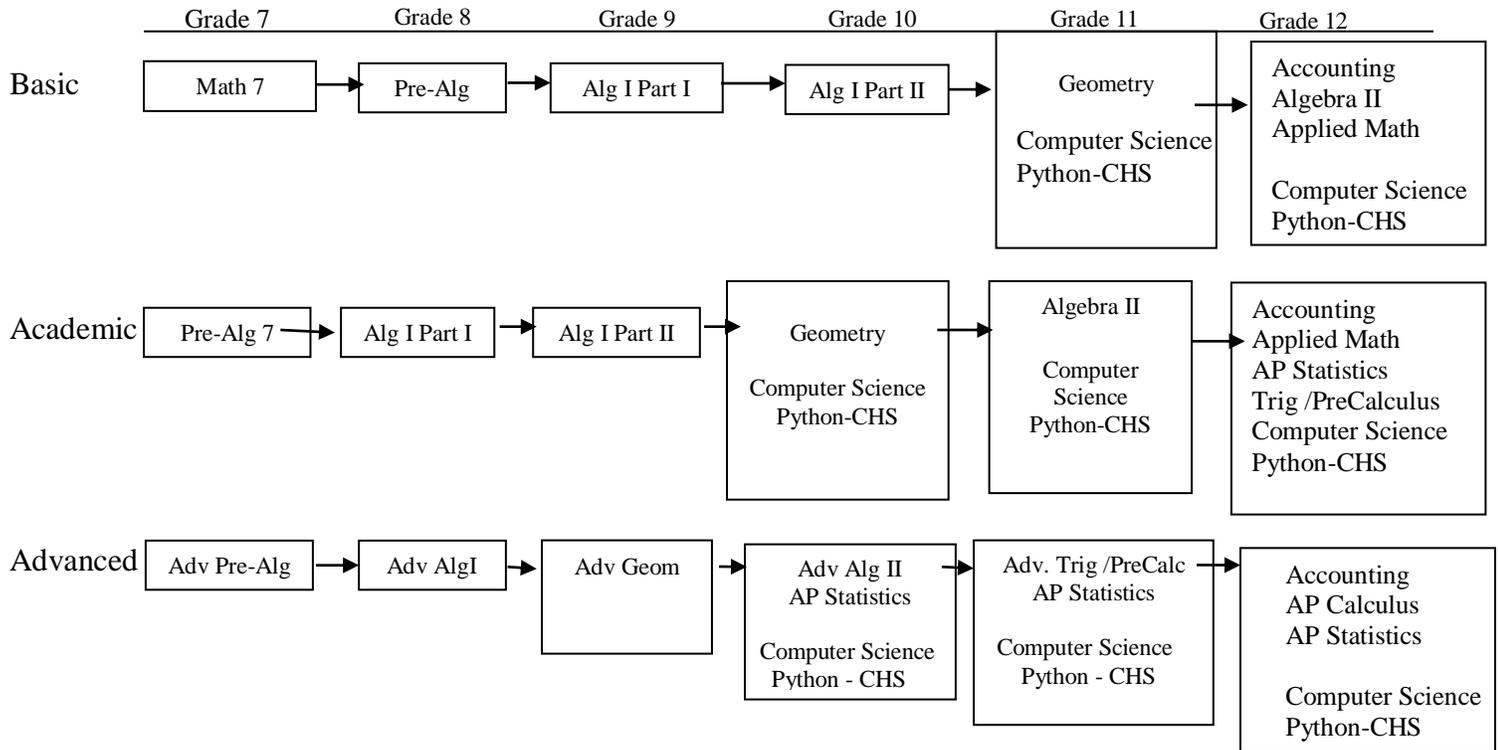
Topics Covered in AP® C Mechanics: Kinematics, Work, Energy, Power, Newton's Laws, Systems of Particles, Linear and Angular Momentum, Circular Motion, Rotation, Torque, Oscillation, Gravitation, Mechanical Waves, and Kinetic Theory of Gasses.

Prerequisite: Successful completion of a high school laboratory science course.

Successful completion of a 2nd year Algebra Course, including Trigonometry.

Successful completion of (or taking concurrently) a Calculus course.

Teacher Recommended Math Sequence



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> Additional .25 quality points | 9 | 1 |
|--|---|---|

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

ALGEBRA II

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

***ADVANCED ALGEBRA II**

10

1

Additional .25 quality points

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

TRIGONOMETRY/ PRE-CALCULUS

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

ADVANCED TRIGONOMETRY/ PRE-CALCULUS

11

1

Additional .25 quality points

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

***ADVANCED PLACEMENT CALCULUS**

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

ACCOUNTING I

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.**

APPLIED MATHEMATICS

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.

Prerequisite: Teacher Recommendation

***ADVANCED PLACEMENT STATISTICS**

10-12

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

10-12

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

SAT/ACT PREP MATH

10, 11

.5

This one semester course helps college bound students to prepare for both the ACT and SAT math sections from college entrance exams. Students will be given test taking strategies on the general format of the test, as well as, on various types of questions. The student will work in the following areas that make up the math sections: basic math, equations, percentages, radicals, and other principles of algebra and geometry. Students will also gain familiarity of the test formats through practice tests along with online websites.

***This course does not fulfill a math requirement.**

SPORTS STATISTICS

11, 12

.5

Sports Statistics is a one-semester course offered for students who wish to understand how to analyze data to answer questions and support decision-making. Statistical techniques on how to collect data, how to graph and analyze graphs of data, and how the laws of probability apply to statistics are taught through a series of hands-on activities and mini-projects, and practiced on real-world data collected both in class and on sports websites. The final sports-themed project will incorporate all techniques and discussions throughout the semester. This class is intended for students who wish to explore the world of statistics, but do not want to commit to the AP Statistics class.

***This course does not fulfill a math requirement.**

Prerequisite/concurrent: Algebra II, 'C' or better

STEM

9-12

.5

The STEM (Science Technology Engineering and Mathematics) classroom will be rooted in project based learning principles and will be broken down into different modules and culminating events. The course will offer a rich exposure to computer design and product based engineering. The goal of the course will be to ensure that students are able to gain the skills and content knowledge necessary to become critical thinkers and problem solvers. We are a project based classroom and each unit of study will explore current advancements in STEM related fields while focusing on a different area of Science. Applied mathematical concepts will be needed in aspects of the course as well. Students must be comfortable working independently and in groups to complete in-class activities and projects.

***This course does not fulfill a math requirement.**

WELLNESS

| | | |
|---|-------|----|
| <u>WELLNESS</u> (1 Semester Required) | 9- 12 | .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.

FOREIGN LANGUAGE

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

| | | |
|-------------------------|-------|---|
| <u>FRENCH II</u> | 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 denoted 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

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

.5

Computer Applications I will 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 will include Microsoft Office and Google software.

COMPUTER APPLICATIONS II

9- 12

.5

Computer Applications II will provide students an advanced, in-depth study of Microsoft Office and Google software. Areas of focus include graphic design using digital publisher (photos, laying out brochures, magazines, and business cards), data analysis, data management, and introduction of programming and computer science

Prerequisite: Computer Applications I (recommended)

WEB DESIGN

10- 12

.5

Web Design will give students a working knowledge of Adobe Dreamweaver and Google software. They will have the opportunity to create websites 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 websites by writing, revising, editing the text, and taking accompanying photographs. Students will be developing technology and design skills.

Prerequisite: Computer Applications I (recommended)

TECHNOLOGY

DESIGN – BUILD - TEST

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.

ADVANCED DESIGN – BUILD - TEST

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

ENGINEER – MANUFACTURE - CONSTRUCT

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,

ENGINEER – MANUFACTURE – CONSTRUCT II

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>FOODS I</u> | 9-12 | .5 |
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An introduction to foods and nutrition, this one semester course is geared toward those interested in learning or improving basic survival skills in the kitchen. This includes planning, preparing, and serving a wide variety of foods. Key nutritional information is included in each unit. Students may choose to take foods for one semester or for one full year by selecting Foods 1 and Foods 2.

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| <u>FOODS II</u> | 9-12 | .5 |
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Focusing on food, nutrition, and worldwide cuisine, this semester course builds on the basic skills learned in Foods 1. Food selections will be discussed and prepared with healthy choices in mind. Students will develop an understanding of other cultures through exploration including projects and foods based learning.

Prerequisite: Foods 1

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| <u>FOODS III: Advanced Foods</u> | 10-12 | .5 |
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This semester advanced foods course focuses on creative food preparation and presentation. An assortment of topics and techniques that will be covered including but not limited to plating and garnishing skills; utilizing special cooking techniques and skills needed for modifying diets; preparing food items for service projects.

Prerequisite: Foods 2

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| <u>FOODS IV: Food for Entertaining</u> | 10-12 | .5 |
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This semester advanced foods course is centered on entertaining. Students will plan, prepare, and formally serve meals. All skills learned in previous foods courses will be applied to this experience, as well as learning different types of meal service, table settings, and proper etiquette when entertaining. Besides entertaining, a focus on regional cooking within the United States will be included within this semester course.

Prerequisite: Foods 3

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| <u>INDEPENDENT LIVING</u> | 10-12 | .5 |
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This course begins with a self-evaluation that allows them to establish future goals. Several topics included in this course are preparing for a job or college interview, renting a house, buying a car, balancing a checkbook, and using credit. This course includes hands on classroom projects, several guest speakers, and instructional materials to help prepare them for adulthood.

CHILD GROWTH AND DEVELOPMENT

10- 12

.5

This one semester courses encourages an understanding of all aspects of children’s physical, intellectual, social, emotional, and moral development. This course will be followed from the prenatal period through school age. This course includes the “Baby Think It Over” doll simulator where students will simulate a care-giving experience outside the classroom. In addition to concepts of child development, this course will teach students the skills necessary for care-giving and future parenting.

MUSIC

COURSE NAME

GRADE

CREDITS

BAND

9- 12

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

MARCHING BAND *(1st Semester only)

9- 12

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This Band course is a new – 1st semester only course and is for students who would like to march, but are unable to schedule Band for the entire year. It will include marching season as well as the December concert.

CONCERT CHOIR

9- 12

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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

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>DRAWING:</u> | 9-12 | .5 |
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This course is project based and will focus on the fundamentals of artistic expression through various drawing mediums. The class will learn and apply different techniques using materials such as pencil, pastel, charcoal, and marker. Students will be exposed, discuss, and interpret significant drawing throughout Art history from Pre-historic to Contemporary Art.

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| <u>PAINTING:</u> | 9-12 | .5 |
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This course is project based and students will learn to work with the four major types of paint (Tempera, Acrylic, Watercolor, and Oil paint), creating original artworks while learning various brush techniques and the application on a multitude of surfaces. Students will be exposed, discuss, and interpret significant paintings throughout Art history from Pre-historic to Contemporary Art.

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| <u>SCULPTURE:</u> | 9-12 | .5 |
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Working within a 3-dimensional space, students will be creating original artworks, whether “in-the-round” or “relief”, using various media in this project based course. Materials used in this sculpture course can range from cardboard and plaster, to clay, wood, and even paper. Students will be exposed, discuss, and interpret significant sculptures throughout Art history from Pre-historic to Contemporary Art.

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| <u>PRINTMAKING:</u> | 9-12 | .5 |
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This project based course will focus on the various types and styles of printmaking, and how they were implemented throughout history; from the printing of newspapers, the recreation of artworks for distribution, to it becoming a recognized art form. Students will create original works using methods of screen printing, linoleum block, wood cut, and stencil. Students will be exposed, discuss, and interpret significant Printmaking throughout Art history.

ADVANCED ART CONCEPTS:

11-12

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This course is reserved for students that have been exposed to and are fluent in various methods, materials, techniques, and design. Project based, students will have the freedom of self-expression through materials of their choice. Themes and ideas are provided to the class, and the students will select their preference in media to execute the idea to the best of their ability.

3D MODELING

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.