

A background image showing a large group of high school graduates wearing white caps and gowns with blue stoles. They are standing in rows, and the image is slightly blurred to make the text stand out.

Pennridge High School

Program of Studies

2024 – 2025

Pennridge School District Administration

Superintendent

Angelo G. Berrios III

Assistant Superintendent for Teaching, Learning, and Assessment

Kathy Scheid, Ed.D.

Assistant to the Superintendent for Administration

Bradley Palmer

Pennridge High School Administration

Timothy Keddie, Principal

Class of 2025

Mr. Abram Hughes, House Principal

Mr. Erik Henrysen, School Counselor A – L

Mrs. Mary Ann Moffett, School Counselor M – Z

Class of 2027

Mr. Ray Ott, House Principal

Mrs. Lori D'Angelo, School Counselor A – L

Mrs. Shannon O'Sullivan, School Counselor M – Z

Class of 2026

Mr. Hilary Czaplicki, House Principal

Mrs. Ashley Plawa, School Counselor A – L

Mrs. Jennifer Pennebacker, School Counselor M – Z

Class of 2028

Mrs. Cara Gurysh, House Principal

Mrs. Yesenia Cuthbert, School Counselor A – K

Mr. Dean Behrens, School Counselor L – Z

Mr. Scott Hegen, Assistant Principal for Athletics and Pupil Services

Upper Bucks County Technical School Administration

Dr. Michael Herrera, Executive Director

Mrs. Stacy Pakula, Assistant Director



Pennridge High School

1228 N. Fifth Street
Perkasie, PA 18944
215-453-6944



Upper Bucks County Technical School

3115 Ridge Road
Perkasie, PA 18944
215-795-2911

Table of Contents

General Information.....	4
Block Scheduling.....	4
Graduation Requirements.....	4
Scholar's Diploma.....	5
Course Levels.....	5
Credits.....	5
Grade Placement.....	5
Required Number of Credits.....	5
Keystone Exams.....	5
Career Pathways Program.....	5
Advanced Placement.....	6
AP Capstone Program.....	6
Dual Enrollment.....	6
Upper Bucks County Technical School.....	6
College Athletic Eligibility.....	7
Pennridge Online Learning Academy.....	7
Course Requests.....	7
Course Withdrawal.....	7
Level Change.....	7
Weighted Grades.....	7
Grade Point Average.....	7
Class Rank.....	7
Honor Roll.....	8
Student Recognition at Graduation.....	8
Course Selection.....	8
Prerequisite.....	8
Course Indicators.....	8
Art.....	9
Business.....	11
English.....	13
Family & Consumer Science.....	17
Health & Physical Education.....	19
Mathematics.....	21
Music.....	25
Science.....	27
Social Studies.....	32
Technology Education.....	36
World Language.....	39
Special Programs.....	42
Upper Bucks County Technical School.....	46
Career Pathways.....	50
Graduation Planner.....	55

General Information

Welcome to the Pennridge High School Program of Studies. We are excited to offer a wide range of courses that cater to a variety of interests and abilities. In this booklet, you will find detailed information about each of the courses we offer, including course descriptions, prerequisites, and graduation requirements. We encourage you to carefully review this guide and consider all your options before making your final course selections.

Pennridge High School is organized by grade levels in “houses,” where each grade has a House Office comprised of a House Principal and two School Counselors. The goal of the house system is to create a smaller learning community for each grade within our large high school. Students have one place to go for most of their academic, social, emotional, and extra-curricular needs. Because they have the consistency of the same House Principal and counselor for all four years of their time at Pennridge High School, students can build meaningful relationships within their houses and thrive.

The goal of the course selection process at Pennridge is to spark a student’s interest through new and exciting opportunities. Teachers, students, counselors, and principals all play a part in assisting students in choosing their future classes. Teachers meet with students to make recommendations while counselors work with students to discover their interests and potential career paths. Students and parents will choose courses through the PowerSchool portal and explore all course offerings via the Program of Studies. Our dedicated faculty and staff are here to support you and help you make the most of your high school experience. We look forward to working with you and helping you achieve your academic and personal goals!

Block Scheduling

Pennridge High School has implemented block scheduling, designed to enhance the educational experience for students. This

schedule offers extended instructional periods, enabling students to explore further into course content while managing a reduced credit load each semester. During the fall semester, most students typically take four classes, allowing for concentrated focus and in-depth learning. This pattern is repeated in the spring semester. By the end of the year, students can take up to eight credits. Pennridge High School’s schedule also incorporates daily flex time, offering students a valuable opportunity for personalized learning. This time can be utilized for reinforcement and remediation, enrichment activities, and club meetings. This scheduling approach expands students' course options and increases student access to teachers throughout the school day, fostering a rigorous and supportive learning environment. Here is a sample of what a schedule might look like for a student:

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Flex Time	Flex Time			
Block 1	Photography I	First Aid/CPR	Geometry	
Block 2	Physics I		German III	
Block 3	American Literature		Sewing II	Ceramics I
Block 4	Accounting I		Modern American History	

Graduation Requirements

The transition to block scheduling allows Pennridge High School students to take and earn more credits than previously possible. The graduation requirements have changed because of this. Pennridge High School issues a standard diploma to all graduating seniors. Each Pennridge High School student must meet current graduation requirements that align with Act 158 from the Pennsylvania Department of Education (PDE). A minimum of 28 credits is now required for graduation from Pennridge High School. Over the next four years, each graduating class will have an increased credit requirement until we reach a total of 28 for the Class of 2028. The requirements meet and exceed those specified by the Pennsylvania State Board of Education. The course and credit hour requirements for graduation from Pennridge High School are specified for each class, as noted on the table below:

	Class of 2025	Class of 2026	Class of 2027	Class of 2028	UBCTS
English	4	4	4	4	4
Social Studies	3	3	3	4*	3*
Math	3	3	3	3	3
Science	3	3	3	3	3
STEM ♦	1	1	2	2	3
Arts & Humanities ●		1	1	1	
Health & Physical Ed.	1.5	1.5	1.5	1.5	1
Electives	9.5	9.5	9.5	9.5	11
Total Credits	25	26	27	28	28
Beginning with the Class of 2026, all students must take .5 credit of Personal Finance (Math, STEM, or Elective credit) or Financial Foundations (Business, Social Studies, or Elective credit). *Pending Board Approval					

Scholar's Diploma

Beginning with the Class of 2028, Pennridge High School students will have the opportunity to earn a Scholar's Diploma. Here are the credit requirements needed to earn a Scholar's Diploma:

	PHS	UBCTS
English	4	4
Social Studies	4	4
Math	4	3
Science	4	3
STEM ♦	2	3
Arts & Humanities ●	1	
Health & Physical Ed.	1.5	1
World Language	2	0
Electives	7.5	12
Total Credits	30	30

Students earning a Scholar's Diploma will have earned two credits of World Language at the high school, maintained a cumulative, weighted GPA of at least 3.4, and taken at least 3 AP/Dual Enrollment courses with scores of 3 or above on eligible AP exams.

Students enrolled at UBCTS must be enrolled in a program for 3 years, maintain a cumulative, weighted GPA of at least 3.4, score advanced on NOCTI exam, and meet the credit requirements outlined in the table above.

Course Levels

Many courses of study have multiple levels in which students may be placed. While we feel it is important for students to challenge themselves, it is also important for students to find balance in their academic experience and be purposeful when selecting courses at the most rigorous levels.

Advanced Placement (AP): Advanced Placement courses are the equivalent of a college course and follow a curriculum designed by the College Board.

Dual Enrollment: Dual Enrollment courses are listed in the Program of Studies and are courses taught by Pennridge teachers in partnership with an accredited college or university. Courses labeled as Dual Enrollment courses are weighted the same as Advanced Placement courses.

Honors: Honors courses are rigorous and challenging and require extensive study of advanced topics. Honors courses may be a part of a course sequence leading to Advanced Placement.

Academic: Academic courses prepare students for admission into post-secondary education, colleges, and universities.

Credits

A credit is a numerical value assigned to all courses. 18-week, daily courses and 36-week, A/B scheduled courses receive 1 credit. 9-week, daily courses and 18-week, A/B scheduled courses receive one half (.5) credit. Graduation requirements are based on

course credits and students only earn credits for courses they successfully complete. See course descriptions for scheduling format and credits offered for each course.

Grade Placement

Students who successfully complete their 8th grade year are placed into 9th grade at Pennridge High School. Students move with their graduating class throughout their time at Pennridge High School. Students must accrue a total of 20 credits prior to the start of their senior year.

Required Number of Credits

- Each student in Grade 9 is required to take 8 credits.
- Each student in Grade 10 is required to take 8 credits.
- Each student in Grade 11 is required to take 6 credits.
- Each student in Grade 12 is required to take 6 credits.*

Any exception to the credit requirements must be approved by the high school principal.

*Seniors in the Class of 2025 are required to take 5 credits.

Keystone Exams

The Keystone Exams are end-of-course assessments designed to evaluate proficiency in academic content. Students must demonstrate proficiency on the Algebra I, Literature, and Biology Keystone Exams to graduate, or they must fulfill one of the other pathways provided to graduate. Students will be signed up to take the Keystone Exams at the conclusion of the trigger courses, such as Algebra I, American Literature, and Biology. Students will be given the opportunity to retake a Keystone Exam throughout their high school career.

Career Pathways Program

The goal of our Career Pathways Program is for students to learn more about their skills and interests and how they relate to their future career. A Career Pathway is a broad grouping of careers that share similar characteristics and whose employment requirements call for many common interests, strengths, and competencies. The U.S. Department of Education, the Pennsylvania Department of Labor and Industry, and the Pennsylvania Department of Education have identified sixteen Career Clusters to help students focus and pursue a possible career path. The Pennridge School District combined the clusters to create the following five broad and flexible paths for student exploration and instruction:

- Arts and Communication
- Engineering, Industry, and Manufacturing Technology
- Financial and Business Services and Information Technology
- Human and Family Services
- Science and Health

Students who select a Career Pathway at Pennridge High School will set goals and discover classes necessary to achieve those goals, have real-world, hands-on career experiences while still

attending high school, and learn more about opportunities after high school. To register and learn more, see page 51 and visit the Career Pathways section of the Pennridge School District website.

Advanced Placement

Advanced Placement (AP) courses are available for students in all grades. Students taking AP courses have the option to take the AP examination in that subject in May of the school year in which the course is taken. Many colleges and universities will grant college credit or advanced standing provided a satisfactory score is earned on the examination or portfolio submission. Students should communicate with specific colleges and universities concerning their policy for granting college credit or advanced standing.

AP Capstone Program

The AP Capstone program includes two courses – AP Seminar and AP Research – and allows students to develop and master key skills needed in college and careers in order to stand out in applications and interviews. AP Seminar is the first of two courses in the Capstone sequence and AP Research is the subsequent and terminal course in the program. Descriptions of both courses can be found in the course listings for each of the four core content areas (English, Math, Science, and Social Studies).

Dual Enrollment

Dual Enrollment courses allow students to earn credit at Pennridge High School and an accredited college or university, such as Bucks County Community College, Gwynedd-Mercy University, and University of Pittsburgh. Students interested in this opportunity have the following two options:

- Take a college course at an accredited college or university. Courses taken at an accredited college or university may not be courses offered at Pennridge High School. While students are welcome to take as many college courses as they desire, students may only complete up to two college courses for *high school credit* per year.
- Take a college course at Pennridge High School, taught by Pennridge teachers. These rigorous courses are for motivated students seeking exposure to college-level studies in a supportive high school environment. All courses that can be taken at Pennridge High School for college credit are identified with a purple square (■) next to the course title. Dual enrollment courses are the equivalent of a college level course and are all weighted the same as an Advanced Placement course.

The courses offered as Dual Enrollment at Pennridge High School are offered through the following colleges and universities:

- Bucks County Community College
- University of Pittsburgh
- Gwynedd Mercy University

Each college and university has different procedures and steps related to registration and payment. Students must register with the associated college or university within the first five class

meetings to be eligible for college credit. All students taking the course, regardless of registration status, will be given grade weighting on the same level as an AP course.

Dual enrollment options are designed to promote student learning above and beyond the basic program of the district. However, the cost of student enrollment in a postsecondary college course shall be borne by the student and/or student's family and not by the district.

Dual enrollment course credit will be given based on their respective content areas to satisfy graduation requirements. They may also be used to satisfy electives. Dual enrollment courses will be included in calculations of high school grade point average (GPA) and class rank.

Pennridge High School uses the following guidelines for Dual Enrollment courses:

- Student eligibility is determined by the college or university offering the dual enrollment courses, not Pennridge High School.
- Each college semester course is awarded 1 credit at Pennridge High School. Dual enrollment courses are weighted in the same way as Advanced Placement classes for GPA and rank purposes.
- Students may not receive dual enrollment course credit for a college course if they have previously received credit from a high school course with comparable course content.
- It is understood that student participation in college-level, dual enrollment programs will be at no cost to the district, unless specifically required by an Individualized Education Program (IEP) or a Gifted Individualized Education Program (GIEP).

Upper Bucks County Technical School (UBCTS)

The Upper Bucks County Technical School (UBCTS) is a public school that specializes in Career and Technical Education. The school was organized in 1962 when the Palisades, Pennridge, and Quakertown Community school districts formed a partnership to share expenses and maximize educational and career opportunities for Upper Bucks County students. Career and Technical Programs at UBCTS are carefully selected based on current and projected workforce data.

All programs are approved by the Pennsylvania Department of Education and comply with explicit federal and state laws that regulate Career and Technical Education. UBCTS programs are managed with input from local business and industry stakeholders. A full listing of programs can be found on the UBCTS website as well as in this program of studies.

Career Internship Program is available to students to earn and learn in a paid internship experience. In addition to gaining work experience and high school credit, students can build a resumé that will assist them with college and/or career readiness. This program is open to students in grades 11 and 12 through the Upper Bucks County Technical School. Students could earn 0.5 credits

for 45 hours of work per semester or 1 credit for 90 hours of work per semester. A certification can be earned from the Pennsylvania College of Technology and is OSHA Articulated.

College Athletic Eligibility

Students planning to participate in Division I or Division II college athletics should be aware of NCAA academic requirements. High school course selection has an impact on whether students will be able to play sports in those colleges. Students should contact their counselor or coach for specific details and visit the NCAA website.

Pennridge Online Learning Academy

Pennridge High School offers cyber courses to our students. These cyber courses will allow students to experience online learning before entering college or the world of work, both of which increasingly require learning in a virtual environment.

Students who successfully enroll in a Pennridge Online Learning Academy course will have their class scheduled into a period of the day that best fits with their other course selections. During that period, students will report to an assigned location to complete course work. There will be a mentor in that room who can assist with technical issues, pacing, or communication with the course teacher. Students who are in good academic standing and can schedule the course at the beginning or end of the day may request permission to have either a late arrival or early dismissal.

A cyber course cannot be added to create an additional credit outside of the normal course load and/or credit maximums. Enrollment into cyber courses is strictly limited and not guaranteed. Enrollment into cyber courses can only take place prior to the start of the school year or second semester. Students who are interested must see their school counselor for more details on the requirements and for an application. Students will be required to reapply each academic year.

Course Requests

Students should carefully select their courses. All students are expected to complete each of the courses they select. All schedule request changes must be made by February 23rd. Course changes made after this date become increasingly difficult to make. Significant decisions, such as staffing and course availability, are made based on the courses students select prior to this date. Adequate schedule planning for students, teachers, and classroom space can be completed only when school officials can consider student schedule requests to be final. If a schedule change becomes necessary, the following regulations will apply:

Course Withdrawal

There are times when students are placed inappropriately in a class. The following procedures must be followed when a student decides to drop a class:

- Students may drop a class without penalty for the first three class meetings of a .5-credit course or the first six class

meetings of a 1-credit course. Any course dropped during this time must be replaced with an equivalent credit.

- Courses dropped after what is outline above must be recorded as a WF (Withdrawal Failure) and will appear on the student's transcript.
- If a student drops a class after the midpoint of the course, an F will be recorded on their transcript.

Minimum credit loads must be carried. Students must speak to their school counselor if they are considering course withdrawal to ensure graduation requirements are met. Parent/guardian approval is required.

Level Change

Students who request a level change must do so within the first 20 class meetings of a course. Students should speak to their teacher or school counselor to determine if the change is warranted and if the requested class is available within the student's schedule.

Weighted Grades

A system of weighted grades will be used to calculate both eligibility for honor roll and class rank. Grades will be weighted as follows:

Grade Scale	QP AP/Dual Enrollment	QP Honors	QP Academic
*QP Stands for "Quality Points"			
A+ = 97 – 100	5.3	4.6	4.3
A = 93 – 96	5.0	4.3	4.0
A- = 90 – 92	4.7	4.0	3.7
B+ = 87 – 89	4.3	3.6	3.3
B = 83 – 86	4.0	3.3	3.0
B- = 80 – 82	3.7	3.0	2.7
C+ = 77 – 79	3.3	2.6	2.3
C = 73 – 76	3.0	2.3	2.0
C- = 70 – 72	2.7	2.0	1.7
D+ = 67 – 69	1.3	1.2	1.3
D = 63 – 66	1.0	1.0	1.0
D- = 60 – 62	0.7	0.7	0.7
F = Below 60	0.0	0.0	0.0

Grade Point Average

Cumulative Grade Point Average (GPA) is based on students' final grades in all courses taken in grades 9 through 12. It is computed at the end of each year. Pass-fail courses are not included. The GPA is computed by multiplying the final course grade's numerical value times the assigned course credit to equal the course quality points. The sum of quality points from all courses completed is divided by the total credit value of all courses completed to determine the GPA. Students also receive a GPA for each quarter that does not factor in previous classes.

Class Rank

Class rank is computed at the close of each school year. Students are ranked with their respective graduating class. Students who transfer from another high school or from home school instruction will be given an estimated rank until they have completed four consecutive semesters at Pennridge High School. All graded

courses are included in the rank calculation. Pass-fail courses are not included. Rank ordering is based on cumulative, weighted GPA.

Honor Roll

Honor roll is determined by the students' quarterly GPA. Students with an Incomplete or a grade of a D or an F are not eligible for honor roll. The following scale is used to determine honor roll:

- Distinguished Honors – 4.2 and higher
- High Honors – 3.9 – 4.19
- Honors – 3.6 – 3.89

Student Recognition at Graduation

A student earning a cumulative, weighted GPA according to the criteria below will be recognized with a special stole:

- Summa Cum Laude – 4.2 or higher
- Magna Cum Laude – 3.9 to 4.19
- Cum Laude – 3.6 to 3.89

Course Selection

The course selection process is a complex experience in decision making. Students and parents should map out a four-year plan. Please refer to the planning guide at the end of this booklet.

Courses are listed by department. As you review the course descriptions, select courses that match your interest and ability. You may also want to choose courses that expose you to something new or challenge you. We hope that you take full advantage of the vast courses available to you.

Students in grades 9 and 10 must select 8 credits. Students in grades 11 and 12 must select a minimum of 6 credits. Any exceptions to course selection requests will be submitted to the high school principal for approval.

Prerequisite

A prerequisite is a course or requirement a student must complete in order to qualify for entry into another course. For example, before a student can schedule Pre-Calculus, the student must have successfully completed Algebra II. Prerequisites are listed in the course descriptions included in this Program of Studies. Prerequisites may be fulfilled by demonstrating proficiency supported by teacher recommendation in lieu of course completion.

Program of Studies Indicators

The following indicators are used throughout the Program of Studies to identify the credit requirement that the course can fulfill.

Science, Technology, Engineering, and Mathematics (STEM)

♦ All courses that fulfill the STEM requirement are identified with this icon next to the course title.

Arts & Humanities

● All courses that fulfill the Arts & Humanities requirement are identified with this icon next to the course title.

Dual Enrollment

■ All courses that can be taken at Pennridge High School for college credit are identified with this icon next to the course title.

Art

If fees or expenses required of an elective class impose a financial hardship on the student, the school district will find alternative means to defray the cost. Students should contact their school counselor to assist with alternative fee payment.

601 Introduction to Art •

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

Introduction to Art is a beginner level art course that develops student skills in art making and creative thinking. Through drawing, painting, and sculpture, students develop technical art-making skills while incorporating self-expression. Students will gain a better understanding of craftsmanship and the elements and principles of design, while exploring a variety of different art materials. Students will also explore the history of arts. **A fee of \$15.00 will be charged for instructional materials used in projects kept by the student.**

637 Drawing and Painting I •

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

This course is designed for students who have an interest in developing drawing and painting skills. Students will explore a variety of drawing and painting mediums, such as pencil, charcoal, pastel, ink, acrylic, watercolor, and mixed media. Students refine their drawing and painting skills by working from observation as well as methods to enhance personal style. The history of art from the Gothic Movement to Pre-Modern is integrated into the curriculum. **A fee of \$15.00 will be charged for instructional materials used in projects kept by the student. Prerequisite: Introduction to Art**

638 Drawing and Painting II •

(9 weeks) .5 Credit | Grades 10, 11, 12

This course is designed for students who are interested in continuing to develop drawing and painting skills along with developing personal style. Emphasis is placed on refined drawing techniques, contemporary painting techniques, printmaking processes, and individual creative growth. Students will explore the creative thinking process through the use of multiple approaches to explore individual problem solving. History of Modern Art is integrated into the curriculum. **A fee of \$15.00 will be charged for instructional materials used in projects kept by the student. Prerequisite: Drawing and Painting I**

610 Advanced Art – Honors •

(18 weeks) 1 Credit | Grades 11, 12

Advanced Art integrates the content presented in the Drawing and Painting I & II to develop more challenging problem solving. Emphasis is on observational skills for portfolio needs and preparation for AP Studio Art requirements. Students explore image manipulation, mixed media, and contemporary methods to enhance personal expression. **A fee of \$25.00 will be charged for instructional materials used in projects kept by the student. Prerequisite: 2 credits in art and/or the permission of an art instructor**

615 AP Studio Art •

(36 weeks, A/B schedule) 1 Credit | Grade 12

Students who have a serious interest in the practical experience of art and are considering a career in the arts have the opportunity to receive credit for college-level course work in AP Studio Art. Emphasis is placed on a sense of quality in the student's work, concentration on the student's particular visual interest, and a breadth of experience in the formal, technical, and expressive processes of the artist. This course is designed to meet individual needs for portfolio refinement. Slide submission to the College Board is encouraged but is at the student's expense. **A fee of \$28.00 will be charged for instructional materials used in projects kept by the student. Prerequisite: Advanced Art or the permission of an art instructor.**

602 AP Art History •

(36 weeks, A/B schedule) 1 Credit | Grades 10, 11, 12

This course is designed for students who want to study and explore the history of art across the globe from prehistory to the present. Students will analyze works of art through observation, discussion, reading, and research-based activities. Students will learn how to evaluate the aesthetics and meaning of art from different eras and cultures. Units of study will focus on learning how to see and make connections to artistic traditions, styles, and practices in a work of art. Students will develop theory about the meaning of a work of art and develop personal voice to interpret and present meaning. Students are encouraged to take the AP Art History Exam in May. **Prerequisite: Teacher recommendation.**

620 Art and Design •

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

Art and Design introduces students to the techniques and processes of the design and creation of functional objects. Students work with reusable and recycled materials; they apply basic design concepts as they develop personal ideas for use with their own creations. **A fee of \$20.00 will be charged for instructional materials used in projects kept by the student.**

641 Sculpture •

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

Sculpture is a course designed for students who have an interest in creating three-dimensional art. Students will develop sculptural skills working with a variety of different mediums such as plaster, clay, wire, paper, and mixed media. Students will develop a better understanding of form and space as well as using creative problem-solving skills to explore personal style. The history of sculpture from pre-historical to Modern art will be integrated into the curriculum. **A fee of \$15.00 will be charged for instructional materials used in projects kept by the student.**

625 Ceramics I •

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

This course is designed for students who have an interest in working with clay. It gives the students experiences in making functional and artistic ceramic pieces using a variety of techniques. The student will learn how to design creative projects using good craftsmanship. This is a hands-on, project-oriented

class. The curriculum focuses on acquiring a general knowledge of clay, hand building techniques, working on the potter's wheel, and glazing and firing techniques. The history of ceramics is introduced. **A fee of \$20.00 will be charged for instructional materials used in projects kept by the student.**

626 Ceramics II •

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

This course is designed for students who are interested in continuing to study ceramics. Emphasis will be placed on alternative methods of construction, advanced wheelwork, and glazing. Students will produce a body of work with an emphasis on style and design concepts. Solutions to specific problems and personal expression are emphasized. **A fee of \$20.00 will be charged for instructional materials used in projects kept by the student. Prerequisite: Ceramics I (a "C" average or better is highly recommended)**

630 Digital Design I •

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

Digital Design I is a project-oriented class in which students will learn the fundamentals of creating digital art and design. Students will use Photoshop & Illustrator software to solve design problems through self-expression. The course will focus on using technology to implement design fundamentals, art concepts, and techniques. Possible projects include photo manipulations, character design, poster designs, illustration, and logo design.

632 Digital Design II •

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

Digital Design II is a project-oriented class, which expands on the tools and concepts of the introductory class. The goal of the class is to allow students to express themselves creatively through technology while solving design problems. Students will develop advanced skills in digital drawing, painting, and image manipulation while working on projects such as concept art, character design, product design, and Illustration. This course encourages student driven learning and creative problem solving through technology. **Prerequisite: Digital Design I**

642 Introduction to 3D Animation •

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

Introduction to 3D Animation introduces students to digital modeling and sculpting. This project-based curriculum develops career and communication skills in digital content production using tools found in various industries including film production, game development, industrial design, advertising, and illustration. The course will concentrate on the modeling-texturing-lighting side of 3D production.

633 Advanced 3D Animation •

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

Advanced 3D Animation builds on the skills of Introduction to 3D Animation while focusing on animation. This project-based curriculum develops career and communication skills in digital animation production. The course covers a variety of subjects within movie, game, and broadcast production. Students will

develop skills in digital storytelling and character development through creating, capturing, and editing video and audio. The course will conclude with the production of a final animation project. **Prerequisite: Introduction to 3D Animation**

635 Photography I •

(9 weeks) .5 Credit | Grades 10, 11, 12

Photography I introduces students to the possibilities of both traditional and digital imagery. Learning is centered on the care and use of cameras, shooting with a 35 mm film camera, developing and enlarging black and white photographs, and creating digital color photos. Emphasis is placed on photographic technology (both chemical and digital) and the creative use of photographic materials. An overview of the history of photography gives students an understanding of the impact of photography in communicating, the role of photography in recording events, and fine art expression within the medium. Students should have access to a 35 mm film camera with manual adjustment controls for focus, aperture, and shutter speed. Digital cameras are optional. **A fee of \$60.00 will be charged for instructional materials used in projects kept by the student.**

636 Photography II •

(9 weeks) .5 Credit | Grades 10, 11, 12

Photography II continues students' understanding of the photographic arts. Emphasis is placed on students' growth of ideas and advanced techniques in lighting, composition, print development, and alternative processes. Digital color and computer manipulations are also explored. The role of photography in the information age, commercial and digital photo applications, and the historical influences of fine art photographers are investigated. Students are required to have access to 35mm film camera with manual adjustment controls for focus, aperture, and shutter speed. Digital cameras are optional. **A fee of \$60.00 will be charged for instructional materials used in projects kept by the student. Prerequisite: Photography I (a "C" average or better is highly recommended)**

Business

510 Accounting I

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

Students planning to enter college for business administration, students headed to business school, students planning to own their own businesses, and all students entering the job market should consider electing this course. Students learn the basic principles and theories of accounting procedures through the complete accounting cycle. Students should have a solid math background and have the ability to think in a logical and systematic manner. Students use the computer to prepare financial transactions and reports. A business simulation is also included in the course.

511 Accounting II – Dual Enrollment ■

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

Offered as a Dual Enrollment course through Gwynedd Mercy University. Students who choose to register with the university have the opportunity to earn 3 college credits.

This second-year course places an emphasis on advanced accounting concepts and principles equivalent to a college level introductory course. This course prepares students for a future in business administration, marketing, and/or accounting. Content areas include finance, management, and cost analysis as well as computerized accounting systems. This accounting course also emphasizes effective business management. Students will decide whether they are taking this course as Dual Enrollment within the first 5 class meetings. **Prerequisite: Accounting I and teacher recommendation**

519 Business Law

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

Business Law provides students with the foundation and skills necessary to become knowledgeable and productive members of society. The information found in this course can help the students make the best possible choices for their future. This course includes the study of practical application of law dealing with the individual's need for protection of his/her personal rights and obligations in everyday life and business agreements. Students will study the origin of law, ethics, legal terminology, contracts, insurance, and property rights (renting, owning).

523 International Business

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

International Business is a foundational course strongly recommended for any student looking to major in Business Administration or International Business in college. In the global village of today, countries are not economically isolated but are dependent upon other countries. Topics covered in International Business include international economics, law, marketing, investments, trade agreements, business culture, and ethics.

531 Entrepreneurship

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

This course offers students the exciting opportunity to examine and explore the prospects of starting their own businesses. This

course is designed around the business plan. It examines how to formulate business ideas, select a location, determine a legal form of organization, acquire financing, find a market, work with personnel, and establish a budget. Through field projects and meeting real entrepreneurs, students examine the entrepreneurial culture in a market economy and students complete a personalized business plan.

536 Financial Foundations

(9 weeks) .5 Credit | Grades 10, 11, 12

This course focuses on the fundamental skills related to personal finance and financial planning, financial literacy, as well as understanding money, wealth, and credit/debt. The course integrates financial concepts related to authentic, personal financial planning with problem solving, planning, and research skills. This course may fulfill the Personal Finance requirement. **Prerequisite: 10th graders require teacher recommendation**

539 Microsoft Specialist – Word & PowerPoint Certification ♦

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

This course will provide students with the knowledge required to create documents and powerful presentations using Microsoft Word 2016 and Microsoft PowerPoint 2016; it will include fundamental and advanced techniques. Upon successful completion of the course, students will be prepared to complete the Microsoft Office Specialist Exam earning a professional certification. This exam is offered at Bucks County Community College and the cost is \$100 – \$125 (paid directly to BCCC). In the business and education community, job applicants with this certification are recognized as proven experts using Microsoft Word & PowerPoint.

541 Microsoft Specialist – Excel & Access Certification ♦

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

This course will provide students with the knowledge required to create useful spreadsheets and powerful database management skills using Microsoft Excel 2016 and Microsoft Access 2016; it will include fundamental and advanced techniques. Upon successful completion of the course, students will be prepared to complete the Microsoft Office Specialist Exam earning a professional certification. This exam is offered at Bucks County Community College and the cost is \$100 – \$125 (paid directly to BCCC). In the business and education community, job applicants with this certification are recognized as proven experts using Microsoft Excel & Access.

548 Introduction to Business

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

If business is in their future thoughts, this course will give students the opportunity to understand the business world better. This course is an introduction to many business concepts and will familiarize students with many subjects offered in the Business Department. Topics of study include economic systems, personal finance, one's role as a consumer, using banking services, making wise credit decisions, saving and investing money, taxes, introduction to accounting, entrepreneurship, business management, and marketing.

556 Sports and Entertainment Marketing

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

This course explores the skills needed for a career in marketing. Students learn about the key functions of marketing and how those functions are applied to the areas of sports and entertainment. This course is designed to promote student awareness of careers in the sports and entertainment industry. Students acquire knowledge related to producing an actual sports and entertainment event, including sponsorship, promotion, advertising, sales, event marketing, and communication.

557 Sports and Entertainment Management

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

This course gives students the opportunity to understand the basic functions of management using topics in the sport industry. Management, marketing, financial and ethical principles will be applied to sports. In addition, information on industry segments such as facility management, event management, and sports agency will be presented. Students will also acquire an understanding of topics such as the impact of technology on sport industries, the globalization of the sports industry, managing diversity within the sport, and ethics in sports organizations.

560 Web Page Design & Presentation ♦ ●

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

This class is for any student willing to learn how to design a web page and to make effective presentations. Students learn linking, frames, tables, navigation bars, buttons, borders, graphics, and forms to create web pages for themselves, the school, and/or businesses and community organizations. Students learn how to code with HTML, use an editor, and prepare PowerPoint presentations.

English

410 English I

(18 weeks) 1 Credit | Grade 9

In this course students study the elements of fiction, drama, and poetry. Using essential questions and big ideas, students will be able to make connections between texts. Students have opportunities to read a variety of texts that range from classics to student choice novels in a literature circle unit. Students will develop vocabulary for understanding that is personalized for individual learning advancements. Students continue to develop their writing skills by completing common assessment writing assignments for different purposes and audiences as well as by using other sources to support their ideas. Students will also journal daily to improve their writing and grammar skills. English I students are encouraged to become independent readers and participate in classroom discussions and activities.

413 English I – Honors

(18 weeks) 1 Credit | Grade 9

This course is designed for students who are prepared for a rigorous study of the elements of fiction, drama, and poetry. Using essential questions and big ideas, students will be able to make connections between texts. Students have opportunities to read a variety of texts that range from classics to student choice novels in a literature circle unit. Students will develop vocabulary for understanding that is personalized for individual learning advancements. Students continue to develop their writing skills by completing common assessment writing assignments for different purposes and audiences as well as by using other sources to support their ideas. English I students are encouraged to be independent readers and participate in classroom discussions and activities. English I – Honors moves at a rapid pace and students are expected to complete extensive readings outside the classroom. **Prerequisite: Teacher recommendation and a grade of “B” or better in 8th grade English**

4114 English Humanities – Honors

(36 weeks, A/B schedule) 1 Credit | Grade 9

This course is designed to satisfy honors-level course requirements in Social Studies and English classes at the ninth-grade level. Students experience a thematically driven, project-based, integrated course that develops critical literacy skills, civic, government and economic consciousness within the context of United States history and various literary works. Interdisciplinary connections incorporate the arts, sciences, and other cultural and community endeavors through Early American History. In addition to critical reading, writing, and analysis, students engage in seminar-style discussions, multimedia projects, and other critical ventures of a contemporary learning experience. Note: This course must be taken in conjunction with Early American History Humanities – Honors. **Prerequisite: Teacher recommendation and a grade of “B” or better in English and Social Studies.**

420 American Literature

(18 weeks) 1 Credit | Grade 10

This course focuses on the skills and strategies necessary to read, analyze, discuss, and write about works of American literature. Units will span from writings at the beginning of American history to contemporary texts. This course will cover various topics, including Literary Movements, the American Dream, Justice, Poetry, Autobiography, and Persuasion. Students will have a degree of student choice in their reading and will be expected to read and write outside the classroom throughout the year. Assignments and activities will challenge students to use higher-level thinking skills, write for authentic audiences, and present in front of peers.

423 American Literature – Honors

(18 weeks) 1 Credit | Grade 10

This course focuses on the skills and strategies necessary to read, analyze, discuss, and write about works of American literature. Units will span from writings at the beginning of American history to contemporary texts. This course will cover various topics, including Literary Movements, the American Dream, Justice, Autobiography, and Persuasion. Many reading assignments will occur in class to assist student comprehension and analysis. Students will have a degree of choice in selecting their reading. Assignments and activities will challenge students to use higher-level thinking skills, write for authentic audiences, and present in front of peers. **Prerequisite: A grade of “B” or better in 9th grade English and the recommendation of the current English teacher**

430 World Literature

(18 weeks) 1 Credit | Grade 11

Students in this course explore a variety of texts and authors from around the globe. Through fiction and non-fiction texts, students will have the opportunity to examine cultures and lifestyles from around the world through the eyes of a variety of authors, allowing for a better understanding of the world in which they exist. Students participate in activities that promote life-long literacy habits such as independent reading, critical reading of fiction and nonfiction texts, writing for a variety of purposes and audiences and the continuing improvement of diction and syntax. Throughout this course, students will be asked to be reflective and analytical in their understanding of the reading, thus broadening their perspective of the world.

433 World Literature – Honors

(18 weeks) 1 Credit | Grade 11

Students in this course explore a variety of texts and authors from around the globe. Through fiction and non-fiction texts, students will have the opportunity to examine cultures and lifestyles from around the world through the eyes of a variety of authors, allowing for a better understanding of the world in which they exist. Students participate in activities that promote life-long literacy habits such as independent reading, critical reading of fiction and nonfiction texts, writing for a variety of purposes and audiences and the continuing improvement of diction and syntax. Throughout this course, students will be asked to be reflective and

analytical in their understanding of the reading, thus broadening their perspective of the world. Students use literary analysis skills to make deeper and broader connections between what they think, read, and communicate in writing and/or speaking. The World Literature – Honors course is designed to challenge students with extensive independent reading, writing, and thinking and through a focus on the quality of their written work. **Prerequisite: A grade of “B” or better in 10th grade English and the recommendation of the current English teacher**

442 AP English: Literature & Composition ■

(36 weeks, A/B schedule) 1 Credit | Grades 11, 12

Offered as a Dual Enrollment course through Bucks County Community College. Students who choose to register with the college have the opportunity to earn 3 college credits.

Students in this college-level course must demonstrate they have strong writing and analytical skills. Comprehensive college-level study of literature, featured thorough study of sophisticated critical approaches to literary texts, lies at the heart of this course. The students study major British and European authors. Students are encouraged to take the AP examination in May. Required outcomes: Multiple formal submissions for portfolio review, extended literary analysis, and timed writing exercises. Students will decide whether they are taking this course as Dual Enrollment within the first 5 class meetings. **Prerequisite: Teacher recommendation and one of the following: a grade of “B” or better in World Literature Honors, a grade of “A” in World Literature Academic, a grade of “B” or better in AP Language and Composition if taken as a junior**

441 AP English: Language & Composition ■

(36 weeks, A/B schedule) 1 Credit | Grades 11, 12

Offered as a Dual Enrollment course through the University of Pittsburgh. Students who choose to register with the university have the opportunity to earn 3 college credits.

This course develops students’ literacy and composition skills in a variety of disciplines and rhetorical contexts. Students examine creative and critical writing, language and vocabulary skills, speaking and listening skills, research methodology, and cultural knowledge. Students become more conscious of the writer’s purpose, audience awareness and expectations, and the purpose of language in effective writing. Students are encouraged to take the AP examination in May. Required outcomes: Seven formal submissions for portfolio review, extended literary analysis, and timed writing exercises. Students will decide whether they are taking this course as Dual Enrollment within the first 5 class meetings. **Prerequisite (12th grade): Teacher recommendation and one of the following: a grade of “B” or better in World Literature Honors, a grade of “A” in World Literature Academic, a grade of “B” or better in AP Literature and Composition if taken as a junior. Prerequisite (11th grade): Teacher recommendation and a grade of “A” in American Literature Honors**

444 Western Literature

(18 weeks) 1 Credit | Grade 12

This survey course focuses on literature that is considered part of the tradition and modern Western canon. Students read works by a variety of authors organized by theme with an emphasis on independent reading and analysis. Students develop ideas and make connections between and among the texts in the course to analyze how literature can act as a reflection of a society and a way to understand humanity.

444C Western Literature Online

(18 weeks) 1 Credit | Grade 12

This survey course focuses on literature that is considered part of the tradition and modern Western canon. Students read works by a variety of authors organized by theme with an emphasis on independent reading and analysis. Students develop ideas and make connections between and among the texts in the course to analyze how literature can act as a reflection of a society and a way to understand humanity. This version of the course is offered as an asynchronous, cyber class. Regular due dates will be posted for all assignments; however, students will not be required to log-in for live sessions. Students may be required to report to school for assessments. Students who are potential NCAA athletes should speak to their counselor before enrolling in this course.

445 Western Literature – Honors

(18 weeks) 1 Credit | Grade 12

This survey course focuses on literature that is considered part of the tradition and modern Western canon. Students read works by a variety of authors organized by theme with an emphasis on independent reading and independent study. Students develop ideas and make connections between and among the texts in the course to analyze how literature can act as a reflection of a society and a way to understand humanity. As an Honors level course, students will be required to engage in independent, critical analysis of complex texts, and are expected to communicate their understandings through sophisticated written and verbal responses. **Prerequisite: Teacher recommendation and grade of “B” or better in 11th grade English**

445C Western Literature – Honors Online

(18 weeks) 1 Credit | Grade 12

This survey course focuses on literature that is considered part of the tradition and modern Western canon. Students read works by a variety of authors organized by theme with an emphasis on independent reading and independent study. Students develop ideas and make connections between and among the texts in the course to analyze how literature can act as a reflection of a society and a way to understand humanity. As an Honors level course, students will be required to engage in independent, critical analysis of complex texts, and are expected to communicate their understandings through sophisticated written responses. This version of the course is offered as an asynchronous, cyber class. Regular due dates will be posted for all assignments; however, students will not be required to log-in for live sessions. Students may be required to report to school for assessments. Students who

are potential NCAA athletes should speak to their counselor before enrolling in this course.

[451 Film Production](#) ♦ •

(18 weeks) 1 Credit | Grades 11, 12

Students write, direct, and produce films, as well as perform the various roles in film production from acting to props management and set design. Students develop original storyboards and screen plays and apply various film techniques to the shooting and production of the films. This is a performance-based class and students should be comfortable with computer and video technology, as well as writing.

[449 Media Production I](#) ♦ •

(36 weeks, A/B schedule) 1 Credit | Grades 11, 12

Media Production is a product-based, student-centered course in which the entire class becomes a production “team” for a newscast. Students learn about the various roles in Media Production such as writing, directing, anchoring, editing, and filming and perform one or more of these roles in a real broadcasting situation. Students explore various editing programs to produce features ranging from a Daily News Program, PSA’s, Advertising, Interview, Current Events, and Global Issues. **Prerequisite: Teacher recommendation and a grade of “B” or better in 10th grade English**

[450 Media Production II](#) ♦ •

(36 weeks, A/B schedule) 1 Credit | Grade 12

This full-year elective provides students with an opportunity to enhance and extend the skills they developed in the entry-level Media Production course and to apply those skills on an ongoing basis. Building on their core knowledge of developing a product from pitch to post-production, students in this course, working as a part of a production team, apply these skills to hands-on experiences in researching, writing, producing, directing, performing on-air, and editing a daily broadcast viewed by all students, staff at the high school and the community. Class will be limited to 18 students/section due to the number of computers available for editing purposes. **Prerequisite: Media Production I**

[454 College and Career Exploration and Skills](#) •

(18 weeks) 1 Credit | Grades 11, 12

This course is designed for students who have a sincere interest in planning college and career opportunities beyond high school. Skills and tools will include college and career exploration; academic-level and technical writing; academic and study skills; time management, organization and work-life balance; inter- and intra-personal communication skills; and portfolio development and reflection to extend beyond high school to equip students as they compete for college and career opportunities.

[457 Creative Writing](#) •

(9 weeks) .5 Credit | Grades 10, 11, 12

This course is intended for students who wish to explore the development of their creative interests. Students must possess an interest in writing and a willingness to share their writing with

others in an open community of writers. Students examine professional genres of creative writing and then use the creative writing process to develop their own creative pieces.

[462 Journalism – Honors](#) •

(18 weeks) 1 Credit | Grades 11, 12

In this honors level course, students will study and practice the writing of various kinds of prose, editing, and reporting. The course emphasizes advanced writing and graphic design for the newspaper medium while students utilize effective reading and intensive research strategies. Students will learn the skills necessary to enter the field of communications in a 21st century society through the use of social media, visual Journalism, laws, and ethics. Students will be required to participate in School Newspaper activities which include interviewing, editing, writing, and publishing for the online publication. **Prerequisite: Teacher recommendation required.**

[481 Public Speaking](#) •

(18 weeks) 1 Credit | Grades 10, 11, 12

Students have opportunities to express themselves orally and in writing in a variety of ways. Students learn to: use general methods for communication with others; employ effective interviewing techniques and procedures; identify group discussion techniques; utilize parliamentary procedure; identify effective listening skills; write and present effective critical responses to speaking, listening, and reading experiences; identify persuasive techniques in writing and speech; and organize, write, and present interpretations and analyses of literary works. Students conduct traditional and electronic research to establish authoritative evidence and to gather concrete supporting materials for writing, reading, and speaking assignments.

[483 British Literature Through the Ages](#) •

(18 weeks) 1 Credit | Grade 12

Students study and respond to, in discussion and writing, important British writings and authors from the Anglo-Saxon period through the present. The cultural and political contexts of all writings in the course are also considered. Students will also gain greater understanding of Shakespeare’s classic texts and their influence on world language and culture. This course includes critical reading, writing, and discussion elements.

[390 Advanced Placement Seminar](#) ♦ •

(36 weeks, A/B schedule) 1 Credit | Grades 10, 11, 12

AP Seminar is the first course in the sequence of the AP Capstone program. AP Seminar engages students in cross-curricular discussions and inspires them to identify and deeply explore issues and/or challenges that exist in the real world by considering multiple perspectives. Inquiry serves as the foundation for all student investigations in this course, as students practice and enhance their reading and interpretative skills and their abilities to scrutinize, synthesize, and communicate their own perspectives after considering multiple sources. Students choose research topics that encompass a broad range of ideas, including academic questions, global concerns, local or civic issues, or any specific areas of interest. Students then create evidence-based arguments,

collaborate to consider different viewpoints and sharpen those arguments, and communicate their findings through oral and written reports both as part of a team and as individuals. The AP Seminar course assessments include two course-related performance tasks and one end-of-course exam. This course is recommended for students seeking to learn how to design and perform a research study and those seeking to improve their investigative, writing, and communication skills. **Prerequisite: Students must express interest in this course and request recommendation from a core-area (English, Math, Science, or Social Studies) teacher to enroll.**

395 Advanced Placement Research ♦ •

(36 weeks, A/B schedule) 1 Credit | Grades 11, 12

AP Research is the final course of the AP Capstone program. AP Research allows students to profoundly explore an academic topic, problem, or issue of individual interest. Through this inquiry, students design, plan, and conduct a year-long research-based investigation to address a research question. Students build upon the skills acquired in the AP Seminar course by developing an understanding of research methodology, exercising ethical research practices, and retrieving, examining, analyzing, and synthesizing information as they investigate a research question. Students evaluate their skill enhancement, record their processes, and archive the artifacts of the development of their academic work in a portfolio. The course culminates in a scholarly paper of approximately 4000–5000 words and a presentation with an oral defense. **Prerequisite: Students must have successfully completed the Advanced Placement Seminar course.**

Family & Consumer Science

If fees or expenses required of an elective class impose a financial hardship on the student, the school district will find alternative means to defray the cost. Students should contact their school counselor to assist with alternative fee payment.

720 Child Development I

(18 weeks) 1 Credit | Grades 10, 11, 12

This course helps students acquire a better understanding of the growth and development of children between the ages of 1 and 5. Students become involved in planning and conducting a 12-week nursery school for children ages 3-5. This course is particularly recommended for students interested in a career working with young children. Note: Child Development I and II may be elected in the same year. **A fee of \$5.00 will be charged for instructional materials.**

721 Child Development II

(18 weeks) 1 Credit | Grades 10, 11, 12

This course is designed to further students' understanding of the growth and development of the preschool child. The students examine and research the theories of Piaget, White, Montessori, and Erickson and the application of theory in teaching young children. Students prepare take-home learning materials for the preschoolers enrolled in the nursery school. Students function as student aides and group leaders in the child development lab. This course is recommended for students interested in the fields of child psychology, social services, elementary education (including early childhood education), and special education. Note: Child Development I and II may be elected in the same year. Students can earn hours towards the requirements for a Child Development Associate (CDA) Ready Certificate in this class. **A fee of \$5.00 will be charged for instructional materials. Prerequisite: Child Development I.**

722 Sewing I

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

This course explores the principles of design in relationship to clothing construction. Students examine current trends for garment construction and production. Students use commercial patterns and select fabrics for the construction of garments and home fashion accessories. This course is designed for beginning to advanced students. All projects are individualized, emphasizing design, choice of pattern, and quality construction. **A fee of \$5.00 will be charged for instructional materials and there may be additional costs based on chosen student projects.**

723 Sewing II ♦

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

This course builds on skills learned in Sewing I. Students increase their skills in clothing construction, learn to customize designs and finally design and construct a unique, one-of-a-kind garment. **A fee of \$5.00 will be charged for instructional materials and there may be additional costs based on chosen student projects. Prerequisite: Sewing I**

727 Fashion Marketing and Merchandising •

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

This course explores the skills needed for a career in fashion marketing and merchandising. Students will learn the business aspects of the apparel industry. The fashion business will be explored from the initial product design to manufacturing and onto the final customer sale. Basics of market economics, textiles, design, and promotion will be explored. Success strategies and fundamentals of the retail industry will be a course focus. Students will have the opportunity to design and create retail displays.

729 Exploring Family and Consumer Science

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

This course is designed to introduce the student to the five areas of Family and Consumer Sciences. The foods and nutrition laboratory allows students to relate selection and preparation of food to the nutritional needs of the individual and family. In clothing and textiles, students select patterns and fabrics to construct a garment based on their ability. Students also explore interior decorating principles and plan a space applying acquired knowledge. In the child development segment, students experience the nursery school laboratory through play to learn activities. Positive relationships in the family and with peers will also be discussed. Students will learn and implement the decision-making process. In all areas of study, consumer skills and knowledge are stressed. **A fee of \$15.00 will be charged for instructional materials and there may be additional costs based on chosen student projects.**

733 Family Life

(9 weeks) .5 Credit | Grades 11, 12

Students focus on self-awareness, family communication skills, balancing work and family, and preparation for family life. Simulated experiences, including Baby Think It Over simulators, are used to expose students to the many aspects of family life. Students consider issues such as establishing relationships and resolving conflicts, communication in the 21st century (including social media), planning for parenting, and analyzing the effects and skills needed to cope with family crises such as death, divorce, spousal abuse, and addictions. Skills needed for every adult's successful and productive life are stressed.

737 Food Preparation I

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

This course is designed to provide students with nutritional and safe food preparation principles on which to acquire knowledge and build skills. Emphasis is placed on development of the skills of balancing time management, nutritional needs, and financial resources while obtaining hands-on experience preparing food. **A fee of \$15.00 will be charged for instructional materials.**

738 Food Preparation II

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

This course is designed to help students further their knowledge and skills in food preparation. Students prepare nutritious, economical meals that incorporate local, ethnic, and international foods. Preparation of complete meals considering preparation

time and availability/cost of the ingredients is emphasized. Career opportunities in the culinary arts field with degree programs are discussed. Note: Food Preparation I and II may be elected in the same year. **A fee of \$15.00 will be charged for instructional materials. Prerequisite: Food Preparation I**

742 Housing and Interior Design I •

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

This practical course helps students make wise decisions concerning their future home using design principles on a realistic budget. The course includes the study of, use of color, floor and wall finishes, etc. Students learn about architectural styles and where they are present in our community. Students apply the knowledge learned and use problem-solving skills to choose a housing plan, draw it to scale, select and arrange furniture, and select a color scheme for the plan. Career opportunities in this field are discussed.

728 Housing and Interior Design II •

(9 weeks) .5 credit | Grades 9, 10, 11, 12

This course provides students the opportunity to develop skills in applying the principles and elements of design. Projects are integrated throughout the course to provide applications as students study architecture, furniture styles and constructions, surface treatments and backgrounds, design, function of space, lighting, outdoor living space and environment, and presentation strategies. Current trends in housing and interior design technology will be incorporated and considered in the planning process. **Prerequisite: Housing and Interior Design I**

746 Nutrition and Wellness

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

Students plan and prepare nutritious and economical meals in this course designed to lead to a healthy lifestyle. This course utilizes current nutritional information and its application to address the prevention of obesity, heart disease, cancer, and eating disorders. Weight loss, maintaining ideal weight and the importance of sports, exercise, and diet are emphasized. Students will learn to limit the use of sugar, sodium, fat, and cholesterol in their diet. **A fee of \$15.00 will be charged for instructional materials. Prerequisite: Food Preparation I**

Health & Physical Education

The Health and Physical Education department has planned courses for each grade level. Satisfactory completion of these courses is a graduation requirement. If fees or expenses required of an elective class impose a financial hardship on the student, the school district will find alternative means to defray the cost. Students should contact their school counselor to assist with alternative fee payment.

Health Education

In the presentation of the health/wellness units of study, it is the goal of the health/physical education staff to satisfy the physical, mental, social, emotional, and intellectual needs of students through the development of acceptable attitudes, concepts, and critical thinking skills.

Physical Education

The physical education course of study has been developed to provide a variety and safe experiences for students. Students are given a chance to experience individual, dual, and team activities, a variety of fitness activities, recreational and leisure time activities, as well as dance and rhythmic activities.

770 Wellness

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

This curriculum is provided for all students using both the classroom and physical education facilities. Health instruction is an integral part of this coeducational wellness course. The health portion of the wellness course includes topics in mental and emotional health, healthy decision-making, stress management, environmental safety, first aid, CPR/AED training, family life/human sexuality, cancer, cardiovascular diseases, and substance abuse awareness. The physical education portion of the wellness course is designed to help the whole student through recreational and lifetime activities emphasizing exercise, problem-solving, cooperation, sportsmanship, and teamwork. This course will help in problem-solving, thinking critically, and self-advocacy.

7822 Physical Education II

(18 weeks, A/B schedule) .5 Credit | Grades 10, 11, 12

This course is designed to promote healthy and lifelong physical activity. Students will have opportunities to participate in team and dual/individual sports such as, but not limited to, Speedball, Basketball, Flag Football, Volleyball, Team Activities, Tennis, Badminton, Pickleball, Table Tennis, and Personal Fitness. These activities not only foster physical fitness but strengthen confidence, leadership, and social skills. This course also provides experiences to foster the school's inclusive environment for students of all abilities.

792 Unified PE

(9 weeks or 18 weeks, A/B schedule) .5 Credit | Grades 10, 11, 12

Unified Physical Education is an elective course that offers a unique opportunity for students of varying levels of ability levels and backgrounds to collaborate and serve as both a peer mentor and learner. This course combines students of all abilities to participate cooperatively in physical activities, including fitness, lifetime activities, and individual and team sports. Students will increase confidence, communication, and leadership skills while working together to ensure success for all participants. This course provides experiences to foster the school's inclusive environment for students of all abilities. In addition, this class could include related field trips.

781 Emergency Care: First Aid/CPR & AED Training

(9 weeks) .5 Credit | Grades 10, 11, 12

This elective course is designed using American Red Cross (ARC) standards. Emphasis will be on urgent care for life-threatening emergencies: sudden cardiac arrest, heart attacks, bleeding, poisoning, and much more. The nature and content of this course are suited for students who are considering a career in the medical professions, such as M.D., D.O., physician's assistant, physical therapist, nurse, nurse practitioner, occupational therapist, EMT, exercise science, or sports medicine. Students can achieve an ARC certification in First Aid/CPR/AED. **A fee of \$40.00 will be charged for First Aid and CPR/AED certification cards. (Price is subject to change according to the American Red Cross.)**

787 Civil Service and Military Fitness

(9 weeks or 18 weeks, A/B schedule) .5 Credit | Grades 11, 12

Civil Service and Military Fitness is an elective course that is an opportunity for students who anticipate applying for one of the U.S. Military Academies, Police Academy, becoming a recruit for a branch of the military after high school, for ROTC requirements, will be playing a collegiate sport, firefighter, EMT or just enjoy working out. Preparing for the various physical fitness assessments will be a significant portion of this course. Instruction and practice for these tests will be done in class, and students will be assisted as they develop their own training program to prepare them for their future endeavors.

794 Individual Sports Activities

(18 weeks, A/B schedule) .5 Credit | Grades 10, 11, 12

This course is designed for students who enjoy individual competition and recreational activities. The course will highlight activities that can be carried over to adulthood and help students assume responsibility for their personal wellness. Activities include Archery, Golf, Frisbee Golf, Tennis, Badminton, Pickleball, Table Tennis, Rhythmic Activities, and other Individual Focused Activities. This course primarily runs in the spring semester.

7912 Lifeguarding & Water Sports and Safety

(18 weeks, A/B schedule) .5 Credit | Grades 10, 11, 12

In this course, students will learn advanced skills in swimming, lifeguarding, and other aquatic techniques. Students will also learn surveillance skills to help prevent injuries or recognize them

immediately. Rescue skills include equipment-based rescues, spinal injury management, and post-rescue care. First aid training and CPR for the Professional Rescuer help prepare students for any emergency. CPR for the Professional Rescuer, AED, and Lifeguarding and basic water safety that includes drown-proofing, safe swimming, and diving. Students will also have a chance to participate in a variety of aquatic activities such as water polo, water basketball, recreational swimming, and team-building aquatic activities. Students may be eligible for Lifeguard Certification if they meet the testing requirements. **A fee of \$40.00 will be charged for Lifeguarding/First Aid and CPR/AED certification cards. (Price subject to change according to the American Red Cross.) Prerequisite: Proficient performance on American Red Cross swimming skills**

796 Team Sports Activities

(18 weeks, A/B schedule) .5 Credit | Grades 10, 11, 12

This course is designed for students who enjoy the competition of team sports. Students will have the opportunity to improve their health and fitness by developing an appreciation for teamwork and fair play. Students will develop skills related to leadership, responsibility, accountability, flexibility, and adaptability. Students will learn to work collaboratively in diverse teams while gaining competency in team sports such as Speedball, Basketball, Flag Football, Soccer, Volleyball, Floor Hockey, and other Team Activities. This course primarily runs in the fall semester.

7982 Officiating and Umpiring

(9 weeks or 18 weeks, A/B schedule) .5 Credit | Grades 10, 11, 12

This coeducational physical education course will focus on team activities (Football, Basketball, Baseball, Softball, and Volleyball). The students will also have the opportunity to study other team activities (Field Hockey, Lacrosse, Soccer, Tennis, Track and Field, Water Polo, and Wrestling). Students will be highly active while participating in class activities. In addition, students will learn the mechanics of officiating and umpiring and put their skills to use by officiating and umpiring the games and competitions during class. This course will encourage students' interpersonal communication, thorough knowledge of the rules by studying the NFHS Rules Book, and confidence to become an official or umpire in their community. With the knowledge gained, students have the opportunity to earn the Junior PIAA certification.

799 Cyber Physical Education

(18 weeks, A/B schedule) .5 Credit | Grades 11, 12

This course will allow students to research fitness and health trends and create personalized fitness programs. Students will track their fitness and their activity through the help of their teacher and an approved wearable fitness tracker. Students will complete workouts on their own time, and course time will be devoted to research and projects related to health and fitness. Students enrolling in this course must be self-motivated and have excellent time management skills. **Prerequisite: Application with counselor and administration approval required.**

344 Anatomy & Physiology – Honors ♦

(18 weeks) .5 Science and .5 P.E./Health Credit | Grades 11, 12

The primary focus of this course will be on case studies involving Human Anatomy and Physiology. Using the scientific process, students will critically analyze the case studies to determine a possible diagnosis and course of action to assist the client in becoming healthier. The units of study are Introduction to Anatomy & Physiology, Chemical Basis of Life, Cellular Metabolism, and Clinical Case Studies involving the Skin & Integumentary System, Skeletal System, Muscular System, Nervous System, Endocrine System, Cardiovascular System, Digestion & Nutrition, Respiratory System, Urinary System, and Reproductive System. The nature and content of this course are suited for students who are considering a career in the medical professions, such as; M.D., D.O., physician's assistant, physical therapist, registered nurse, occupational therapist, EMT, dentist, psychologist, or sports medicine. Advanced-level juniors may elect both a chemistry course and Anatomy & Physiology Honors. Teacher recommendation is required. **Prerequisites: Biology I and Physics I**

Mathematics

231 Advanced Placement Calculus AB ♦

(27 weeks) 1.5 Credits | Grades 11, 12

The AB Calculus class is designed to cover what students study during the first semester and a half of a college calculus class. The curriculum has been designed by the College Board through consultation with teachers and college professors from across the nation. Students review functions and students examine limits, derivatives and their applications, and integrals and their applications. Students are encouraged to take the Advanced Placement examination in May. Graphing calculators are required from the department. **Prerequisite: “B” in Precalculus – Honors or an “A” in Precalculus with teacher recommendation**

233 Advanced Placement Calculus BC ♦

(18 weeks) 1 Credit | Grade 12

The BC Calculus class is designed for students who have successfully completed the AP Calculus AB course. The curriculum, primarily designed by the College Board, is a continuation of the material studied in the AB class. This course is also an introduction to multivariable calculus, material beyond that of the College Board’s BC Calculus curriculum. Topics include advanced integrals, series, parametric, polar and vector functions, vector calculus, partial differentiation and multiple integration. Students are encouraged to take the Advanced Placement examination given in May. Graphing calculators are required. Students may borrow a graphing calculator from the department. **Prerequisite: Advanced Placement Calculus AB with teacher recommendation**

239 Multivariable Calculus: Calculus III – Honors ♦

(18 weeks) 1 credit | Grade 12

Multivariable calculus is an extension of the calculus studied in the Advanced Placement calculus (BC level) class. Concepts such as derivatives and integrals are applied to three dimensions. Students will learn how to take partial derivatives and multiple integrals and apply to finding maximum and minimum values of surfaces and the volume under a surface. Material is supported using computer software that can be used to graph three dimensional shapes. **Prerequisite: Advanced Placement Calculus BC**

236 Calculus – Honors ♦

(18 weeks) 1 Credit | Grades 11, 12

The honors level calculus class is designed to cover what students study during the first semester of a college calculus course. The topics covered will be limits, derivatives and their applications, and integrals. Students will apply calculus concepts through real world problems and projects. The graphing calculator will be used to support and explore fundamental calculus topics. Students may borrow a graphing calculator from the department. **Prerequisite: Recommendation from Precalculus teacher and a “B” or better in Precalculus or a “C” or better in Precalculus – Honors**

242 Algebra I ♦

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

Algebra I is designed to develop organized, logical thinking processes. Students review integers and their computation and explore linear equations by solving, graphing, and writing linear equations. Students are introduced to systems of linear equations, exponents, and quadratic equations. Problem solving techniques are emphasized. Online tools and the graphing calculator are used to support concepts explored. **Prerequisite: Math 8**

245 Algebra IA ♦

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

This course is designed for students who want to continue their studies in Algebra but may need more time on each concept. The approach of the class is to use hands-on techniques and experiments to show how algebra is developed and used. The graphing calculator is used to explore topics from a graphical viewpoint. Topics studied include the arithmetic of positive and negative numbers and the solving, graphing, and writing of linear equations. Projects are assigned supporting the material studied. Students are encouraged to take Algebra IB the following year and in so doing, will have studied topics covered in the Algebra I course.

246 Algebra IB ♦

(18 weeks) 1 Credit | Grades 10, 11, 12

Algebra IB is the second course of a two-year Algebra I program. Following a review of topics studied in Algebra IA, students explore systems of equations, exponents, quadratic equations, and factoring. Emphasis is placed on the application of algebra. Projects are assigned supporting the material studied. **Prerequisite: Algebra IA**

249 Algebra II ♦

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

As an extension of Algebra I, students review solving and graphing linear equations. They continue with an in-depth study of systems of equations and inequalities, functions including piecewise, quadratics, radicals, exponents, rationals, logarithms, matrices, data analysis, and probability. Students work in cooperative groups to solve real-world problems. Communication of mathematical topics is stressed. Graphing calculators are used, when appropriate, to enhance students’ problem-solving skills. Projects are assigned supporting the material studied. **Prerequisite: Algebra I, Algebra IB (C or better recommended), or Geometry**

252 Algebra II – Honors ♦

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

Students study the same core topics as Algebra II, but with more emphasis on the development of the foundations of calculus. Students explore additional topics in systems with three unknowns and counting methods as time permits. Students work in cooperative groups to solve real-world problems. Communication of mathematical topics is stressed. The graphing calculator is used to help students understand the concepts. Students may borrow a graphing calculator from the department.

Projects are assigned supporting the material studied.
Prerequisite: Algebra I (B or better recommended) and/or Geometry – Honors, and recommendation of 8th grade math teacher or high school Geometry teacher.

256 College Algebra – Dual Enrollment ♦ ■

(18 weeks) 1 Credit | Grades 10, 11, 12

Offered as a Dual Enrollment course through Bucks County Community College. Students who choose to register with the college have the opportunity to earn 3 college credits.

This course reviews and extends the concepts from Algebra II to support the future study of Pre-Calculus. Students use graphing utilities to examine functions and their inverses, trigonometric functions and their graphs, identities, formulas, equations, and the solving of right angles. The course also features preparation for the mathematics portion of the SAT. Graphing calculators are required. Students may borrow a graphing calculator from the department. Students will decide whether they are taking this course as Dual Enrollment within the first 5 class meetings.

Prerequisite: Algebra II and Geometry

258 Advanced Placement Statistics ♦

(36 weeks, A/B schedule) 1 Credit | Grades 10, 11, 12

AP Statistics provides students with the opportunity to explore data and determine how the results from those data can be applied. The course is designed for students planning to attend college whether they plan to major in a mathematics field or not. The course is presented in a hands-on manner with in-class activities playing a major role. The four themes studied in AP Statistics are exploring data, planning a study, probability, and statistical inference. Students are encouraged to take the AP examination in May. Graphing calculators are required. Students may borrow a graphing calculator from the department. **Prerequisite: Teacher recommendation and Precalculus – Honors or concurrent enrollment in Precalculus - Honors.**

261 Statistics ♦

(18 weeks) 1 Credit | Grades 10, 11, 12

This course provides students with the opportunity to study and experiment with statistics and data analysis. Students look at the way statistics are used in the work world and how statistics can be manipulated in order to mislead. Students develop awareness of these misuses in order to make the students better consumers. Students work in a hands-on manner to discover some of the basic ideas used in statistics today. Students complete statistical research projects and experiment with real life data. A graphing calculator is required. Students may borrow a graphing calculator from the department. **Prerequisite: Algebra II and Geometry**

265 Computer Programming (with Python) – Honors ♦

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

Computer Programming is a preparatory-level course preparing students for AP Computer Science – A. Students successfully completing this course will gain an in-depth knowledge of programming and software development principles applicable to most major programming languages and environments. The primary language used in this course is Python, however students

will also have exposure to Scratch, Python, Ruby, Processing, and Arduino languages as well. This honors-level course is designed to introduce students to coding using the Python programming language. There is an emphasis on critical thinking, problem solving, and creativity. Specific topics include functions, variables, expressions, conditionals, loops, strings, lists, graphics, animations, classes, and debugging. Skills in computational thinking and creating algorithms will be developed. **Prerequisite: Algebra II or concurrent enrollment in Algebra II**

266 Advanced Placement Computer Science Principles ♦

(36 weeks, A/B schedule) 1 Credit | Grades 9, 10, 11, 12

The AP Computer Science Principles course is designed to be equivalent to a first-semester introductory college computing course. In this course, students will develop computational thinking vital for success across all disciplines, such as using computational tools to analyze and study data and working with large data sets to analyze, visualize, and draw conclusions from trends. The course is unique in its focus on fostering student creativity. Students are encouraged to apply creative processes when developing computational artifacts and to think creatively while using computer software and other technology to explore questions that interest them. They will also develop effective communication and collaboration skills, working independently and collaboratively to solve problems, and discussing and writing about the importance of these problems and the impacts to their community, society, and the world. **Prerequisite: Algebra I and Geometry; Algebra II or concurrent enrollment in Algebra II with teacher recommendation**

267 Advanced Placement Computer Science – A ♦

(36 weeks, A/B schedule) 1 Credit | Grades 10, 11, 12

The AP Computer Science program is designed by the College Board. This course is similar to an introductory course offered at the college level. The course introduces students to computer science through programming. The JAVA language is used in a problem-solving environment. Features of the language, data types and structures, algorithms, and applications are examined. Students are encouraged to take the Advanced Placement examination in May. **Prerequisite: Grade of “C” or better in Computer Programming or teacher recommendation and Algebra II or concurrent enrollment in Algebra II**

273 Discrete Math – Honors ♦

(18 weeks) 1 Credit | Grades 10, 11, 12

This is a hands-on, problem-solving course intended for students who would like to broaden their mathematical experience beyond the topics covered in the traditional Calculus sequence. The first semester focuses on the mathematics of competition and will include Game Theory, Voting Methods, Apportionment, Fair Division and Logic—topics that connect mathematics with economics, history and political science. The second semester focuses on the mathematics of networks and will include Graph Theory, Scheduling, Coding and Cryptography. These topics relate closely to computer science, networking, and data protection. Scheduling will also look at efficiency in project management. Most units will include student-designed projects

applying the concepts to real-world problems identified by the students. Students should expect to read, reason, discuss, and think creatively as they work on mathematical questions.

Prerequisite: Precalculus or concurrent enrollment in Precalculus. Teacher recommendation is required

276 Geometry ♦

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

Students are introduced to formal reasoning through the use of a proof. Students also examine congruent triangles, quadrilaterals, similarity, area and volume, circles, and use of Geometer's Sketchpad, and circles. Students are assigned projects to support the material studied in the course. **Prerequisite:** Algebra I or Algebra IB

279 Geometry – Honors ♦

(18 weeks) 1 Credit | Grades 9, 10

Students study the concepts of deductive reasoning through proofs as well as triangles, quadrilaterals, similarity, circles, area and volume, and use of Geometer's Sketchpad, and non-Euclidean geometry. Students also explore transformational geometry if time permits. Projects are assigned supporting the material studied. **Prerequisite:** Algebra I (B or better recommended) and teacher recommendation

282 Informal Geometry ♦

(18 weeks) 1 Credit | Grades 10, 11, 12

Students are introduced to formal reasoning through the use of experimentation and geometric explorations. Students also examine congruent triangles, quadrilaterals, similarity, area and volume, circles, and use of Geometer's Sketchpad, and circles. Projects are assigned supporting the material studied. **Prerequisite:** Algebra I or Algebra IB and teacher recommendation

289 Precalculus – Honors ♦

(18 weeks) 1 Credit | Grades 10, 11

This course is offered as preparation for the Advanced Placement Calculus (BC) class. Students study polynomial and rational functions, logarithmic and exponential functions, and trigonometric functions as well as conic sections, parametric and polar coordinates, and vectors. Students work in groups to solve real world problems. Projects are assigned supporting the material studied. Graphing calculators are required. Students may borrow a graphing calculator from the department. **Prerequisite:** Algebra II – Honors with teacher recommendation and Geometry – Honors

292 Precalculus ♦

(18 weeks) 1 Credit | Grades 10, 11, 12

This course contains the mathematics intended for students preparing for higher education. Topics covering polynomial, exponential, logarithmic, and trigonometric functions are studied. Students work in groups to solve real-world problems. Projects are assigned supporting the material studied. Graphing calculators are required. Students may borrow a graphing calculator from the department. **Prerequisite:** Geometry and Algebra II (C or

better recommended), and Algebra II teacher recommendation

297 Personal Finance ♦

(18 weeks) 1 Credit | Grades 10, 11, 12

Students will apply critical thinking skills to real world financial situations and recognize the impact of financial decisions. Real world topics covered will include income, money management, spending and credit, planning for higher education, as well as saving and investing. Students will gain knowledge in finance, debt, and credit management. They will evaluate and understand insurance and taxes. Students will explore renting versus buying a house while designing personal and household budgets utilizing checking and savings accounts. Algebraic concepts including linear functions, exponential functions, and literal equations will be used throughout. Statistics will also be used to analyze data and help in the decision-making process. This course will provide a foundational understanding for making informed personal financial decisions leading to financial independence. **Prerequisite:** Completion of one high school math credit

298 Personal Finance – Honors ♦

(9 weeks) .5 Credit | Grades 10, 11, 12

Students will apply critical thinking skills to real-world financial situations and recognize the impact of each financial decision. Students will gain knowledge in banking, handling taxes, creating a working budget, and adjusting that budget as necessary. Students will investigate interest topics involving borrowing, the incorporation of interest payments, debt and credit management, and the ins and outs of home ownership including understanding amortization schedules. Statistics will be used to analyze data and help in the decision-making process. To enhance their experience the students will learn to use excel for self-created spreadsheets and other financial technology tools – including an exploration of the stock market. The course will provide a foundational understanding for making informed personal financial decisions leading to financial independence. **Prerequisite:** Completion of one high school math credit

271 Decision Making in Sports – Dual Enrollment ♦ ■

(18 weeks) 1 Credit | Grades 11, 12

Offered as a Dual Enrollment course through the University of Pittsburgh. Students who choose to register with the university have the opportunity to earn 3 college credits.

This honors course will introduce data science concepts for sports analytics. Students will be introduced to concepts related to data collection, data quality, data analysis and modeling, as well as data visualization, through the context of sports analytics. Draft selection, game-day decision-making, and player evaluation are just a few of the applications in which sports analytics play a crucial role today. In addition to the sports teams, other stakeholders in the industry (e.g., the leagues' offices, media, etc.) invest in analytics. Recently, advanced data mining and machine learning techniques have been incorporated into the operations of sports franchises. In this course, students will become familiar with data science concepts and data analysis techniques, the interpretation and use of probabilities, the notion of overfitting

and how to avoid it, and the components of a useful visualization. Students will decide whether they are taking this course as Dual Enrollment within the first 5 class meetings. **Prerequisite: Precalculus (B or better)**

390 Advanced Placement Seminar ♦ ●

(36 weeks, A/B schedule) 1 Credit | Grades 10, 11, 12

AP Seminar is the first course in the sequence of the AP Capstone program. AP Seminar engages students in cross-curricular discussions and inspires them to identify and deeply explore issues and/or challenges that exist in the real world by considering multiple perspectives. Inquiry serves as the foundation for all student investigations in this course, as students practice and enhance their reading and interpretative skills and their abilities to scrutinize, synthesize, and communicate their own perspectives after considering multiple sources. Students choose research topics that encompass a broad range of ideas, including academic questions, global concerns, local or civic issues, or any specific areas of interest. Students then create evidence-based arguments, collaborate to consider different viewpoints and sharpen those arguments, and communicate their findings through oral and written reports both as part of a team and as individuals. The AP Seminar course assessments include two course-related performance tasks and one end-of-course exam. This course is recommended for students seeking to learn how to design and perform a research study and those seeking to improve their investigative, writing, and communication skills. **Prerequisite: Students must express interest in this course and request recommendation from a core-area (English, Math, Science, or Social Studies) teacher to enroll.**

395 Advanced Placement Research ♦ ●

(36 weeks, A/B schedule) 1 Credit | Grades 11, 12

AP Research is the final course of the AP Capstone program. AP Research allows students to profoundly explore an academic topic, problem, or issue of individual interest. Through this inquiry, students design, plan, and conduct a year-long research-based investigation to address a research question. Students build upon the skills acquired in the AP Seminar course by developing an understanding of research methodology, exercising ethical research practices, and retrieving, examining, analyzing, and synthesizing information as they investigate a research question. Students evaluate their skill enhancement, record their processes, and archive the artifacts of the development of their academic work in a portfolio. The course culminates in a scholarly paper of approximately 4000–5000 words and a presentation with an oral defense. **Prerequisite: Students must have successfully completed the Advanced Placement Seminar course.**

Music

Music courses are offered to students who wish to explore the many facets of music theory, creation of music, and performance experience. Whether exploring music or pursuing a musical career, all students can find a course that is designed to meet their needs.

910 Symphonic Band – Honors •

(36 weeks, A/B schedule) 1 Credit | Grades 10, 11, 12

Symphonic Band is offered by audition to qualifying students who play woodwind, brass, or percussion instruments. Technique, music reading, artistic interpretation, tone production, articulation accuracy and advanced musicianship are all developed. This course promotes student achievement at the highest level of performing and technical skills. Students also expand their knowledge of music theory, music history and culture, improvisation, composition, and music technology integration through a set amount of additional written and performance-based class requirements. These requirements are determined based on the number of years a student has enrolled in the class via project contract. **Prerequisite: At least one year of Concert Band and completed auditions by director**

911 Concert Band •

(36 weeks, A/B schedule) 1 Credit | Grades 9, 10, 11, 12

Concert Band is offered to students who play woodwind, brass or percussion instruments. Students play a variety of concert literature that will develop their music reading ability, instrumental technique, ensemble skills, interpretation, tone production, and general musicianship. Designed as a developing band class, students are encouraged, but not required to participate in marching Band. Concert Band students are required to attend after school rehearsals and concert performances. **Prerequisite: Participation in the middle school band or orchestra programs or the equivalent, and/or the approval of the director**

913 Concert Orchestra •

(36 weeks, A/B schedule) 1 Credit | Grades 9, 10, 11, 12

Concert Orchestra is offered to students who play string instruments. Students play a variety of fine instrumental literature while continuing their studies of select instrumental methods. Technical skills, reading ability, interpretation, tone production and general musicianship are developed. Students have the opportunity to perform in numerous concerts in the school community. Students are required to attend after-school rehearsals and performances. Students who are eligible will have the opportunity to audition for County and District ensembles. **Prerequisite: Participation in the middle school orchestra programs or the equivalent, by audition, and/or approval of the high school director**

917 Chamber Orchestra – Honors •

(36 weeks, A/B schedule) 1 Credit | Grades 10, 11, 12

Chamber Orchestra is offered by audition to qualifying students who play violin, viola, cello or string bass. Students develop their technical and musical proficiency through the study of a variety of advanced and collegiate instrumental literature. Technique, music reading, artistic interpretation, tone production, articulation accuracy, and advanced musicianship are all developed. This course promotes student achievement at the highest level of performing and technical skills. Students also expand their knowledge of music theory, music history and culture, improvisation, composition, and music technology integration through a set amount of additional written and performance-based class requirements. These requirements are determined based on the number of years a student has enrolled in the class via project contract. **Prerequisite: At least one year of Concert Orchestra and completed auditions by director**

939 Mixed Choir •

(36 weeks, A/B schedule) 1 Credit | Grades 9, 10, 11, 12

Mixed Choir is offered to students who love to sing and perform. Active participation and pursuit of individual musical growth are essential for the successful performance of choral music. Students learn to develop proper vocal techniques and performance discipline. Emphasis is placed on training the singers to become better musicians through learning the fundamentals of music and singing. The choral repertoire prepares them for eventual participation in the Concert Choir. The Mixed Choir performs both classical and contemporary works at the appropriate developmental level. A repertoire is chosen that reflects a variety of styles, forms, and cultures and includes both sacred and secular texts. At least three school and community performances are scheduled throughout the year. Students are eligible to audition for County Chorus. Participation in the Mixed Choir includes required evening rehearsals (as determined by the director) and all community performances.

950 Concert Choir – Honors •

(36 weeks, A/B schedule) 1 Credit | Grades 10, 11, 12

Concert Choir is offered by audition to qualifying students who sing at an advanced level. Students develop their technical and musical proficiency through the study of a variety of advanced choral literature. Technique, music reading, artistic interpretation, tone production, and advanced musicianship are all developed. This course promotes student achievement at the highest level of performing and technical skills. Students also expand their knowledge of music theory, music history and culture, improvisation, composition, and music technology integration through a set amount of additional written and performance-based class requirements. These requirements are determined based on the number of years a student has enrolled in the class via project contract. **Prerequisite: At least one year of Mixed Choir and completed auditions by director**

920 Advanced Placement Music Theory •

(18 weeks) 1 Credit | Grades 11, 12

AP Music Theory is offered to those students who previously completed Music Composition and Theory. Emphasis will be on taking the fundamentals of music and creating more complex harmonies, rhythms, melodies, and forms. Additional emphasis is placed on ear-training and technical materials. Successful completion of this course prepares the student to take the Advanced Placement examination in Music Theory. Students are encouraged to take the Advanced Placement Examination in May. **Prerequisite: Music Composition and Theory and teacher recommendation**

925 Music Composition and Theory •

(18 weeks) 1 Credit | Grades 10, 11, 12

This course is designed to give students the fundamentals necessary to create their own music. Students study the elements of music, the mechanics of music, and musical notation. Each student will be able to take the learned composition skills and successfully create various styles of music. **Prerequisite: Keyboarding or piano skills are recommended.**

930 Music Technology I ♦ •

(18 weeks, A/B schedule) .5 Credit | Grades 10, 11, 12

Students are introduced to various methods of creating and performing music utilizing technology. The material covered includes synthesizer performance, midi sequencing, computer music notation software, and hands-on studio recording opportunities. Students receive hands-on experience with Finale, Garage Band, and Logic Pro. Upon completion of this class, students will be able to actively operate in a studio recording and music composition setting. **Prerequisite: Demonstrated piano or keyboarding skills**

931 Music Technology II ♦ •

(18 weeks, A/B schedule) .5 Credit | Grades 10, 11, 12

Students expand their knowledge of music creating and performance through technology. Hands-on experiences focus on live audio processing, synthesizer workstations, advanced MIDI applications, computer-based sequencing, and more advanced song composition techniques. Music Tech II focuses more directly on the recording of live performances and mixing/mastering the product of those performances. **Prerequisite: Music Technology I**

936 Electronic Keyboard Lab •

(18 weeks, A/B schedule) .5 Credit | Grades 9, 10, 11, 12

The Electronic Keyboard Lab is designed for students who want to learn to play the piano and electric keyboard. Students do not need any music background. This is an introductory course and covers every aspect of keyboard playing from reading music notation to basic performance practice. Students further their keyboard and piano skills through independent practice. Students are required to provide a pair of headphones on a daily basis for this course.

937 Electronic Keyboard Lab II •

(18 weeks, A/B schedule) .5 Credit | Grades 9, 10, 11, 12

This course is designed as an advanced learning opportunity for students who have completed the introductory course and for those who already possess piano background. Students have the

opportunity to use technology to enhance their keyboard performance skills. **Prerequisite: Electronic Keyboard Lab or teacher recommendation**

940 Guitar Studio •

(18 weeks, A/B schedule) .5 Credit | Grades 9, 10, 11, 12

The Guitar Studio is designed for students who want to learn to play the acoustic guitar. Students do not need any music background. This is an introductory course and covers aspects of guitar playing including reading music notation, chord symbols, charts, improvising, and basic performance practice. Students with guitar experience are welcome. Students on every level will further their guitar skills through independent practice. Guitars will be provided for in class use.

941 Music in Media •

(18 weeks, A/B schedule) .5 Credit | Grades 10, 11, 12

Music in Media is a course designed to introduce students to the more immediate impact music has on their lives. This is achieved through analysis of both historical and present-day examples of music propaganda, commercial advertisement, and entertainment (TV and film) soundtracks. Students do not need previous musical background. Any creation/compositional elements of the course will be completed using GarageBand. Students will need personal headphones for daily work within class.

938 Rock Band 1 •

(36 weeks, A/B schedule) 1 Credit | Grades 9, 10, 11, 12

Rock Band 1 is designed for students who know how to play guitar, keyboard, bass, or drums. This class will focus on giving students an opportunity to form a band, rehearse as a band, and perform as a band. Students will learn the form of popular music and perform songs that have already been written. The culminating project will be performance based. Throughout the class students will design, rehearse, and execute a performance set list. In addition to the performance aspect, students will learn how to book gigs and to create basic marketing products such as logos, flyers, business cards, and social media calendars for their band. This course may be repeated for credit. **Prerequisite: Guitar Studio or Electronic Keyboard Lab I or teacher recommendation**

945 Rock Band 2 •

(18 weeks, A/B schedule) .5 Credit | Grades 10, 11, 12

Rock Band 2 is for students who play guitar, keyboard, bass, or drums and will focus on songwriting and recording their own music. Students in this class will take their knowledge of song form and begin to write their own compositions. In this class, students will work collaboratively to write music as well as individually. Then students will rehearse their song with the other students in the class to make up a band. Once they have a final song, students will record the song in conjunction with students in the Music Technology 2 class. Students will also discuss how to market their work as a new artist. The culminating project will be a recording of various songs students have created throughout the class. This course may be repeated for credit. **Prerequisite: Rock Band 1 or teacher recommendation.**

Science

310 Biology I ♦

(18 weeks) 1 Credit | Grade 9

This course involves the study of interactions between the various forms of life and their physical environments. Students investigate topics such as the characteristics of life, genetics, the diversity of living things, and relationships in the environment. Students enrolled in Algebra II – Honors or a higher mathematics course are encouraged to take Biology I – Honors. **Prerequisite:** Concurrent enrollment in at least Algebra IA.

313 Biology I – Honors ♦

(18 weeks) 1 Credit | Grade 9

This course presents a challenging study of the interactions between the various life forms and their physical environments. Students investigate topics, such as the characteristics of life, cells from a biochemical viewpoint, organ systems, heredity, genetics, biotechnology, the diversity of living things, and relationships in the environment. Laboratory work is designed to develop investigative and higher order thinking skills. Students in this course have the opportunity to investigate the anatomical structures of vertebrates through the dissection of a white rat. Biology I – Honors is the first course in the honors science program. It is strongly recommended that students are concurrently enrolled in Algebra II – Honors or Geometry – Honors. **Prerequisite:** Teacher recommendation is required.

321 Advanced Placement Biology ♦

(36 weeks) 2 Credits | Grades 11, 12

The Advanced Placement Biology course follows the outline published by the College Board and is conducted on the freshman college level. This course includes the study of the unity of living things, the interdependence of organisms and environment, biochemistry, genetics, and some physiology of animals. Laboratory work supports class work and includes extensive microscope and dissection work. The students in this course complete the dissection of a mammal such as the mink, rabbit, or cat. Students are encouraged to take the Advanced Placement Examination in May. The nature and content of this course is suited for students who are considering a major related to the medical field or the sciences. Advanced level juniors may elect both Chemistry I – Honors and AP Biology. **Note: There is a lab fee for the preserved specimen that is used for dissection.** **Prerequisite:** Chemistry I – Honors, Physics I – Honors, and Biology I – Honors with grades of B or better. Teacher recommendation is required.

323 Biology II – Honors ♦

(18 weeks) 1 Credit | Grades 11, 12

The major goal for students enrolled in this course is to become involved with many experiences that encourage biological research. The course is directed toward a thorough understanding of the major concepts of biology, particularly from the molecular level. Topics studied include biochemistry, comparative anatomy of plants and animals, genetics, and environmental studies. The

major dissection project in this course is a preserved mink, rabbit, or cat. **Note: There is a lab fee for the preserved specimen that is used for dissection.** Advanced-level juniors may elect both Chemistry I – Honors and Biology II – Honors. **Prerequisite:** Biology I and Chemistry I. Teacher recommendation is required.

344 Anatomy & Physiology – Honors ♦

(18 weeks) .5 Science and .5 P.E./Health Credit | Grades 11, 12

The primary focus of this course will be on case studies involving Human Anatomy and Physiology. Using the scientific process, students will critically analyze the case studies to determine a possible diagnosis and course of action to assist the client in becoming healthier. The units of study are Introduction to Anatomy & Physiology, Chemical Basis of Life, Cellular Metabolism, and Clinical Case Studies involving the Skin & Integumentary System, Skeletal System, Muscular System, Nervous System, Endocrine System, Cardiovascular System, Digestion & Nutrition, Respiratory System, Urinary System, and Reproductive System. The nature and content of this course are suited for students who are considering a career in the medical professions, such as; M.D., D.O., physician's assistant, physical therapist, registered nurse, occupational therapist, EMT, dentist, psychologist, or sports medicine. Advanced-level juniors may elect both a chemistry course and Anatomy & Physiology Honors. Teacher recommendation is required. **Prerequisites:** Biology I and Physics I

326 Chemistry I ♦

(18 weeks) 1 Credit | Grades 11, 12

This course involves the study of matter and its interactions, including laboratory techniques. Areas of investigation include the mole concept as it applies to chemical composition and chemical equations, the periodic law, the gas laws, atomic and molecular structure, the solution process, and acid and base concepts. **Note:** A graphing or scientific calculator is required for this course. Students may borrow a scientific calculator from the science department. **Prerequisite:** Physics I with a grade of C or better or Properties of Matter with a grade of B or better and concurrent enrollment in at least Algebra II.

329 Chemistry I – Honors ♦

(18 weeks) 1 Credit | Grades 10, 11, 12

This course is the third in the honors science program and requires in-depth exploration of chemistry concepts and performance of profound laboratory experiments and research. Students investigate concepts related to chemical composition, gas behavior, models of the atom, molecular structure and geometry, chemical reactions and their mathematical relationships, aqueous solutions, and acids and bases. Students aspiring to take AP Chemistry and/or AP Physics C should take this course. **Note:** A graphing or scientific calculator is required for this course. Students may borrow a scientific calculator from the science department. **Sophomores may elect to take Chemistry I – Honors concurrently with Physics I – Honors provided they receive a recommendation from their Biology I – Honors teacher and have earned a grade of A in Biology I – Honors**

and in Algebra II – Honors or Geometry – Honors. **Prerequisite:** Physics I – Honors or AP Physics 1 with a grade of C or better or Physics I with a grade of A. Students must be concurrently enrolled in at least Algebra II.

332 Chemistry II – Honors ♦

(18 weeks) 1 Credit | Grades 11, 12

This course aims to reinforce and supplement earlier study in chemistry. Students have the opportunity to review and strengthen mathematical applications and theoretical concepts. Major areas of investigation include organic chemistry, solutions and their properties, chemical equilibrium, oxidation-reduction reactions and equations, and topics from physical chemistry. Note: A graphing or scientific calculator is required for this course. Students may borrow a scientific calculator from the science department. **Prerequisite:** Physics I, Chemistry I, and Algebra II with grades of B or better. Teacher recommendation is required.

339 Advanced Placement Chemistry ♦

(36 weeks) 2 Credits | Grade 12

This course is a second-level course in chemistry that prepares students to take the Advanced Placement Examination. It is highly recommended that students who take this course follow the honors track in both science and mathematics. The broad range of topics in this course follow the guidelines established by the College Board and include atomic theory and atomic structure, chemical bonding, kinetic molecular theory, liquids and solids, solutions and solution stoichiometry, reaction types and related stoichiometry, kinetics, equilibrium, thermodynamics, oxidation and reduction, and electrochemistry. Students are encouraged to take the AP examination in May. The nature and content of this course is suited for students who are considering a major related to the medical field or the sciences. Note: A graphing or scientific calculator is required for this course. Students may borrow a scientific calculator from the science department. **Prerequisite:** It is required that students enroll concurrently in Calculus – Honors, AP Calculus AB or AP Calculus BC and have completed Physics I – Honors, Chemistry I – Honors, and Precalculus with a B or better in each of these courses. Teacher recommendation is required.

341 Forensics ♦

(9 weeks) .5 Credit | Grades 11, 12

Forensics provides an option for students who have a general interest in science but are not interested in pursuing advanced study in Biology, Chemistry, Physics and/or Astronomy and Geology. Students are introduced to what a forensic scientist does; students also practice the techniques associated with securing and processing a crime scene as well as the collection, identification and documentation of blood, glass, fingerprints, and handwriting. **Prerequisite:** Biology I and Physics I with a C or better or Properties of Matter and Principles of Science with a B or better. Students must have completed or are concurrently in Algebra II or Informal Algebra II.

343 Criminalistics ♦

(9 weeks) .5 Credit | Grades 11, 12

Criminalistics provides an option for students who have a general interest in science but are not interested in pursuing advanced study in Biology, Chemistry, Physics and/or Astronomy and Geology. Students are introduced to what a criminalist does; students also practice the techniques associated with securing and processing a crime scene as well as the collection, identification, and documentation of human remains, shoe impressions, soil, hair, and fibers. **Prerequisite:** Biology I and Physics I with a C or better, or Properties of Matter and Principles of Science with a B or better. Students must have completed or be concurrently enrolled in Algebra II or Informal Algebra II.

345 Criminology – Honors ♦

(18 weeks) 1 Credit | Grades 11, 12

Criminology Honors is a course for honors-level science students who are pursuing a career and/or have an interest in criminology. Students will perform in-depth investigations of the role of evidence, processing a crime scene, latent print examination, forensic pathology, forensic anthropology, trace evidence examination, serology, and forensic application of social sciences. The course is structured as a problem-based program with authentic assessments. Students who completed Forensics and/or Criminalistics are not eligible to enroll in this course. **Prerequisite:** Completion of Biology I and Physics I with a B or better. Students must have completed or be concurrently enrolled in a Chemistry course. Teacher recommendation is required.

353 Astronomy and Geology ♦

(18 weeks) 1 Credit | Grades 11, 12

This course introduces students to the basic concepts of astronomy and geology. The astronomy portion of the course covers topics that include an in-depth study of the solar system, the sun, the moon, eclipses, stars, galaxies, and the history of astronomy. The geology portion of the course focuses on rocks and minerals, plate tectonics, earthquakes, volcanoes, glaciers, earth processes, geologic time, and dinosaurs. This course is not open to students who have taken Earth & Space Science. **Prerequisite:** Students must have completed Biology I, Physics I, and Chemistry I or be concurrently enrolled in a chemistry course.

356 Earth and Space Science ♦

(18 weeks) 1 Credit | Grades 10, 11, 12

This course is designed for students to investigate the practical aspects of such topics as weather, astronomy, minerals and rocks, physical and chemical properties of matter, geologic time, and surface features of the earth. The course incorporates multiple laboratory experiences and students are expected to prepare formal lab reports and give presentations of experimental results. This course is recommended as a second or third science course for students who are not planning to attend a college or university. Students who completed Physics or Chemistry are not eligible to enroll in this course. **Prerequisite:** Completion of a Biology I course and concurrent enrollment in at least Algebra IB.

362 Environmental Science I ♦

(18 weeks) 1 Credit | Grades 11, 12

The Environmental Science I course is designed for those students who want to study the relationships between humans and the world in which they live. Environmental Science I focus on three main areas: conservation and protection of natural resources, environmental education and communication, and environmental research. Techniques and skills, which the students develop, are applied during the outdoor activities throughout this course.

Prerequisites: Algebra I

365 Advanced Placement Environmental Science ♦

(18 weeks) 1 Credit | Grades 11, 12

The goal of the AP Environmental Science course is to provide students with the scientific principles, concepts, and methodologies required to understand interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preserving them. Students are encouraged to take the Advanced Placement examination in May. Juniors may elect to take both Chemistry and AP Environmental Science. **Prerequisites:** It is required that students have completed Biology I, Physics I, and Chemistry I with a B or better. Teacher recommendation is required.

368 Physics I ♦

(18 weeks) 1 Credit | Grades 10, 11, 12

This course enables students to study the physical laws under which humans exist. Through classroom and laboratory experiments and experiences, students refine their ability to observe and interpret scientific phenomena. Students investigate topics in mechanics such as motion, forces, momentum, and energy as well as an introduction to electricity and magnetism through the study of electrostatics and circuits. Primary emphasis is placed on the development of conceptual understanding of physical phenomena. Note: A graphing or scientific calculator is required for this course. Students may borrow a scientific calculator from the science department. **Prerequisite:** Algebra I with a C or better.

371 Physics I – Honors ♦

(18 weeks) 1 Credit | Grades 10, 11, 12

This course is the second in the honors science program. It is designed for students who wish to pursue an in-depth high school physics course. Students investigate topics in mechanics such as motion, forces, momentum, and energy as well as an introduction to electricity and magnetism through the study of electrostatics and circuits. This course moves at a faster pace than Physics I which provides additional opportunities for theoretical and mathematical depth. Students planning to take Advanced Placement Physics 2, Advanced Placement Physics C, and/or Advanced Placement Chemistry in their junior or senior year should enroll in this course. Note: A graphing or scientific calculator is required for this course. Students may borrow a scientific calculator from the science department. **Prerequisite:** Biology I – Honors with a B or better, concurrent enrollment

in at least Algebra II, and completion of Geometry with a B or better. Teacher recommendation is required.

375 Advanced Placement Physics 1 ♦

(18 weeks) 1 Credit | Grades 10, 11, 12

The AP Physics 1: Algebra-Based is structured around the “big ideas” of physics, which encompass core scientific principles, theories, and process of the discipline. The course is designed as a first-year physics course with no prior physics coursework necessary. Students will cultivate their understanding of physics and science practices as they explore the following topics: Kinematics; Dynamics; Circular Motion; Simple Harmonic Motion; Linear Momentum and Its Conservation, Work, Energy, and Conservation of Energy; Rotational Motion, Rotational Momentum and Its Conservation; Electrostatics: Electric Charge and Electric Force; Resistors in DC circuits; and Mechanical Waves and Sound. The course requires that 25% of the instructional time is spent in laboratory work, with an emphasis on inquiry-based investigation that provide students with opportunities to demonstrate the foundational physics principles and apply science practices. Students are encouraged to take the Advanced Placement Examination in May. The nature and content of this course is suited for students who are considering a major related to the medical field, the sciences, or the engineering field. Note: A graphing or scientific calculator is required for this course. Students may borrow a scientific calculator from the science department. Students are not permitted to enroll in this course if they completed Physics I – Honors. **Prerequisite:** Students must be concurrently enrolled in Precalculus – Honors. Students should have earned an A in Algebra II – Honors. Teacher recommendation is required.

374 Engineering Physics – Honors ♦

(18 weeks) 1 Credit | Grades 11, 12

Engineering Physics Honors is a course with an in-depth study of physics and its application to engineering design and analysis. Students investigate and apply new topics as well as expanding on topics previously studied in their first-year physics course. This course complements other science and math courses, specifically AP Physics. This course is project- oriented, and completion of unit projects is a course requirement. Note: A graphing or scientific calculator is required for this course. Students may borrow a scientific calculator from the science department. **Prerequisite:** Students must have completed or be concurrently enrolled in Chemistry I or Chemistry I – Honors and Precalculus or Precalculus – Honors. Teacher recommendation is required.

376 Advanced Placement Physics 2 ♦

(18 weeks) 1 Credit | Grades 11, 12

The AP Physics 2: Algebra-Based is structured around the “big ideas” of physics, which encompass core scientific principles, theories, and process of the discipline. The course is designed as a second-year physics course. Students will cultivate their understanding of physics and science practices as they explore the following topics: Thermodynamics; Fluid Statics and Dynamics; Electrostatics: Electric Force, Electric Field, and Electric

Potential; DC circuits and RC Circuits (steady state only); Magnetism and Electromagnetic Induction; Geometric and Physical Optics; and Quantum Physics, Atomic, and Nuclear Physics. The course requires that 25% of the instructional time is spent in laboratory work, with an emphasis on inquiry-based investigation that provide students with opportunities to demonstrate the foundational physics principles and apply science practices. Students are encouraged to take the Advanced Placement Examination in May. The nature and content of this course is suited for students who are considering a major related to the medical field or humanities or fine arts. For those students who are considering a major related to the sciences or engineering are recommended to enroll in AP Physics C when they meet the prerequisites. Note: A graphing or scientific calculator is required for this course. Students may borrow a scientific calculator from the science department. **Prerequisite: Physics I with an A or Physics I – Honors or AP Physics 1 and be concurrently enrolled in at least Pre-Calculus. Students need to have either completed or take concurrently Chemistry I – Honors or Chemistry I. Teacher recommendation is required.**

378 Advanced Placement Physics: Mechanics ♦

(18 weeks) 1 Credit | Grades 11, 12

This is a second-level course in physics. Completion of this course prepares a student to take the Advanced Placement Physics “C” Mechanics examination. The course encompasses comprehensive coverage of mechanics. Classical mechanics includes kinematics, Newton’s laws of motion, work, energy, power, systems of particles, linear momentum, circular motion and rotation, and oscillations and gravitation. Students are encouraged to take the Advanced Placement examination in May. This course is highly recommended for students who are considering a major in the sciences or engineering. Note: A graphing or scientific calculator is required for this course. Students may elect to take AP Physics: Mechanics concurrently with AP Calculus AB provided that they have completed Precalculus – Honors with a grade of A. Students may not take AP Physics: Mechanics concurrently with Calculus – Honors. **Prerequisite: Physics I – Honors or AP Physics 1 or AP Physics 2. AP Calculus AB with a grade of B or higher or Calculus – Honors with a grade of A. Teacher recommendation is required. Seniors are required to have completed Chemistry I – Honors with a grade of B or higher while juniors may elect to take AP Physics: Mechanics concurrently with Chemistry I – Honors provided they have completed Physics I – Honors or AP Physics I with a grade of A.**

379 Advanced Placement Physics: Electricity and Magnetism ♦

(18 weeks) 1 Credit | Grades 11, 12

This is a third-level course in physics. Completion of this course prepares a student to take the Advanced Placement Physics “C” Electricity and Magnetism examination. The course encompasses comprehensive coverage of electricity and magnetism. Electricity and magnetism includes electrostatics, conductors, capacitors, dielectrics, electric circuits, magnetostatics, and electromagnetic induction. Students are encouraged to take the Advanced Placement examination in May. This course is highly recommended for students who are considering a major in the

sciences or engineering. Note: A graphing or scientific calculator is required for this course. **Prerequisite: Completion of AP Physics: Mechanics**

380 Principles of Science ♦

(18 weeks) 1 Credit | Grades 10, 11, 12

The major goal for this course is to enable students to study the physical laws under which man exists. Through classroom and laboratory experiences, students acquire the ability to observe and interpret scientific phenomenon. Techniques and skills, which the students develop, are expanded throughout the course. Topics include energy and motion, electricity and energy resources, and energy on the move. Students who have taken Chemistry and/or Physics may not select this course. **Prerequisite: Students must have completed or be concurrently enrolled in at least Algebra IB.**

383 Properties of Matter ♦

(18 weeks) 1 Credit | Grades 10, 11, 12

The major goal for this course is to enable students to study the physical laws under which humans exist. Through classroom and laboratory experiences, students acquire the ability to observe and interpret scientific data. Students will develop laboratory techniques and skills. This course is designed for students who wish to prepare for study beyond high school but who need additional study in science and mathematics in preparation for the formal study of chemistry and/or physics. Students who have taken Physics and/or Chemistry may not elect this course. Topics include Kinetic theory of solids, liquids, and gases; gas laws; mole concept; solutions and chemical reactions. Students who have taken Chemistry and/or Physics may not select this course. **Prerequisite: Students must have completed or concurrently enrolled in at least Algebra IB.**

390 Advanced Placement Seminar ♦ •

(36 weeks, A/B schedule) 1 Credit | Grades 10, 11, 12

AP Seminar is the first course in the sequence of the AP Capstone program. AP Seminar engages students in cross-curricular discussions and inspires them to identify and deeply explore issues and/or challenges that exist in the real world by considering multiple perspectives. Inquiry serves as the foundation for all student investigations in this course, as students practice and enhance their reading and interpretative skills and their abilities to scrutinize, synthesize, and communicate their own perspectives after considering multiple sources. Students choose research topics that encompass a broad range of ideas, including academic questions, global concerns, local or civic issues, or any specific areas of interest. Students then create evidence-based arguments, collaborate to consider different viewpoints and sharpen those arguments, and communicate their findings through oral and written reports both as part of a team and as individuals. The AP Seminar course assessments include two course-related performance tasks and one end-of-course exam. This course is recommended for students seeking to learn how to design and perform a research study and those seeking to improve their investigative, writing, and communication skills. **Prerequisite: Students must express interest in this course and request**

recommendation from a core-area (English, Math, Science, or Social Studies) teacher to enroll.

395 Advanced Placement Research ♦ ●

(36 weeks, A/B schedule) 1 Credit | Grades 11, 12

AP Research is the final course of the AP Capstone program. AP Research allows students to profoundly explore an academic topic, problem, or issue of individual interest. Through this inquiry, students design, plan, and conduct a year-long research-based investigation to address a research question. Students build upon the skills acquired in the AP Seminar course by developing an understanding of research methodology, exercising ethical research practices, and retrieving, examining, analyzing, and synthesizing information as they investigate a research question. Students evaluate their skill enhancement, record their processes, and archive the artifacts of the development of their academic work in a portfolio. The course culminates in a scholarly paper of approximately 4000–5000 words and a presentation with an oral defense. **Prerequisite: Students must have successfully completed the Advanced Placement Seminar course.**

Social Studies

109 Early American History

(18 weeks) 1 Credit | Grade 9

Early American History is an introduction to the history and culture of the United States from the Age of Jefferson through the Progressive Era. Students will use higher level thinking through skills through interactive learning experiences and authentic assessment to explore the political, economic, and social themes of 19th Century America. Course requirements include essays, debates, oral written projects, assignments from supplemental readings and textbooks. Through these assignments students further develop skills in reading, note taking, verbal expression, research, and the ability to become an independent as well as cooperative learner.

106 Early American History - Honors

(18 weeks) 1 Credit | Grade 9

Early American History is an introduction to the history and culture of the United States from the Age of Jefferson through the Progressive Era. Students will use higher level thinking through skills through interactive learning experiences and authentic assessment to explore the political, economic, and social themes of 19th Century America. Course requirements include essays, debates, oral written projects, assignments from supplemental readings and textbooks. Through these assignments students further develop skills in reading, note taking, verbal expression, research, and the ability to become an independent as well as cooperative learner. **Prerequisite: Teacher recommendation is required.**

4117 Early American History Humanities - Honors

(36 weeks, A/B schedule) 1 Credit | Grade 9

This course must be taken in conjunction with English Humanities-Honors. This course is designed to satisfy honors-level course requirements in Social Studies and English classes at the ninth-grade level. Students experience a thematically driven, project-based, integrated course that develops critical literacy skills, the history and culture of the United States during the 19th Century. Interdisciplinary connections to incorporate the arts, sciences, and other cultural and community endeavors through early American history. In addition to critical reading, writing, and analysis, students engage in seminar-style discussion, multimedia projects, and other critical ventures of a contemporary learning experience. **Prerequisite: Teacher recommendation and a grade of “B” or better in English and Social Studies.**

118 Advanced Placement Human Geography •

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

AP Human Geography introduces high school students to college-level introductory human geography or cultural geography. The content is presented thematically rather than regionally and is organized around the discipline’s main subfields: economic geography, cultural geography, political geography, and urban geography. Case studies are drawn from all world regions, with an emphasis on understanding the world in which we live

today. The goal for the course is for students to become geo-literate, engaged in contemporary global issues, and more informed about multicultural viewpoints. Students will see geography as a discipline relevant to the world in which they live. Students are encouraged to take the AP Human Geography Exam in May. The exam assesses student understanding of the skills and learning objectives outlined in the course framework. Highly motivated students who are ready for such intensive work and are self-directed individuals should consider this course. **Prerequisite: Teacher recommendation required.**

110 Modern American History – Honors

(18 weeks) 1 Credit | Grade 10

This course is a study of modern American history from the beginning of the 20th century with World War I through the Present Day and how these events impacted our culture. Course requirements include engaging learning experiences, debates, oral and written reports, and regular assignments from various primary and secondary sources. Through these assignments students further develop skills in reading, writing, note-taking, verbal expression, research, digital literacy, and the ability to become independent and cooperative learners. **Prerequisite: Teacher recommendation is required.**

113 Modern American History

(18 weeks) 1 Credit | Grade 10

This course is a study of modern American history from the beginning of the 20th century with World War I through the Present Day and how these events impacted our culture. Students will spend time exploring how America became a world power, how we developed a uniquely American culture, and how our involvement in world events has molded America into what it is today. Course requirements include engaging learning experiences, debates, oral and written reports, and assignments from various primary and secondary sources. Through these assignments, students further develop skills in reading, writing, note-taking, verbal expression, research, and digital literacy, as well as the ability to become independent and cooperative learners.

122 World History & Culture – Honors

(18 weeks) 1 Credit | Grade 11

This course is based on the unifying theme of globalization as well as the study of government, religion, and economics in relation to the history and culture of modern world societies. Students utilize these cultural themes to understand the development and interaction of people and nations around the world. Emphasis is also placed on the impact of these civilizations on the rest of the world as well as the world’s impact on their cultures. This course relies on a regional study of the world to identify and explain the emergence of world patterns and the impact of these patterns on both western and non-western cultures. Honors students are actively engaged in higher-level critical thinking and student-centered activities in order to analyze, interpret, and evaluate the historical and cultural patterns of the world. **Prerequisite: Teacher recommendation is required.**

125 World History & Culture

(18 weeks) 1 Credit | Grade 11

This course is based on the unifying theme of globalization as well as the study of government, religion, and economics in relation to the history and culture of modern world societies. Students utilize these cultural themes to understand the development and interaction of people and nations around the world. Emphasis is also placed on the impact of these civilizations on the rest of the world as well as the world's impact on their cultures. This course relies on a regional study of the world, after introductions to globalization and the themes of culture, to include Europe, Russia, China, Japan, India, the Middle East, Africa, and Latin America. While exploring these regions, students are actively engaged in student-centered activities to analyze, interpret, and evaluate the history and culture of a region and its impact on the world.

119 Advanced Placement United States History

(36 weeks, A/B schedule) 1 Credit | Grades 10, 11, 12

This course emphasizes the historical understandings equivalent to those gained in a college-level introductory course. It focuses on the general narrative of American history from the discovery and settlement of the New World up to modern times. This course also includes an examination of the political, social, economic, intellectual, and cultural history of the United States. Research projects may be assigned to the class. The demanding nature of this course requires extensive independent reading and study of the text, along with the use of original source documents. Only highly motivated students who are ready for such intensive work and are self-directed individuals should consider this course. Students are encouraged to take the Advanced Placement examination in May. Note: Students who elect this course in 10th grade are not required to take the Modern American History course. Students who elect this course in 11th grade must take it in combination with World History & Culture or AP World History course. Students who elect this course in 12th grade are not required to take any other social studies courses during their senior year. Summer Assignment Required. **Prerequisite: Teacher recommendation and "B" average or better in previous Honors Social Studies course.**

151 Advanced Placement World History

(36 weeks, A/B schedule) 1 Credit | Grades 11, 12

The purpose of the AP World History course is to develop a greater understanding of the evolution of global processes and contacts in interaction with different types of human societies. This course enables students to pursue a rigorous study of world events from the perspective of an historian who analyzes historical evidence, identifies recurrent patterns and trends, and evaluates choices and decisions. AP World History highlights the nature of changes in international frameworks and their causes and consequences, as well as comparisons among major societies, while building on an understanding of cultural, institutional, and technological precedents that, along with geography, set the human stage. Specific themes provide consistent attention to contacts among societies that form the core of world history as a field of study. Note: Students who elect this course in 11th grade are not required to take the World History & Culture course.

Students who elect this course in 12th grade are not required to take any other social studies courses during their senior year. Summer Assignment Required. **Prerequisite: Teacher recommendation and "B" average or better in previous year's honors or AP Social Studies course.**

169 Advanced Placement Psychology •

(36 weeks, A/B schedule) 1 Credit | Grades 11, 12

The purpose of the AP course in Psychology is to introduce the systematic and scientific study of the behavior and mental processes of human beings and other animals. Included is a consideration of the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. Students also learn about the ethics and methods psychologists use in their science and practice. Students are encouraged to take the Advanced Placement examination in May. Note: Students who elect this course in 11th grade must take it in combination with World History & Culture or AP World History. **Prerequisite: Teacher recommendation and "B" average or better in previous year's honors or AP Social Studies course.**

145 Advanced Placement Government and Politics

(36 weeks, A/B schedule) 1 Credit | Grade 12

The AP Government and Politics course provides an analytical perspective on government and politics in the United States. This course involves both the study of general concepts used to interpret U.S. politics and the analysis of specific case studies. It also requires familiarity with the various institutions, groups, beliefs, and ideas constituting U. S. political reality. Units include Foundations of American Democracy, Interactions Among Branches of Government, Civil Liberties and Civil Rights, American Political ideologies and Beliefs, and Political Participation. Only highly motivated students ready for intensive study should consider this course. Students may elect to take the AP Exam in May. **Prerequisite: Teacher recommendation and "B" average or better in previous year's Honors or AP Social Studies course.**

148 Advanced Placement European History

(36 weeks, A/B schedule) 1 Credit | Grade 12

This course emphasizes the historical understandings equivalent to those gained in a college-level introductory course. It focuses on the general narrative of European history from 1450 onward. The course also includes an examination of the political and diplomatic, intellectual and cultural, as well as the social and economic history of Europe. Research projects may be assigned to the class during the year. Because of the demanding nature of this course, it should only be attempted by students who are highly motivated and ready for such work. The course requires extensive independent reading. Students are encouraged to take the Advanced Placement examination in May. Note: Students who elect this course are not required to take any other social studies courses in their senior year. Summer Assignment Required. **Prerequisite: Teacher recommendation and "B" average or better in previous year's honors or AP Social Studies course**

390 Advanced Placement Seminar ♦ ●

(36 weeks, A/B schedule) 1 Credit | Grades 10, 11, 12

AP Seminar is the first course in the sequence of the AP Capstone program. AP Seminar engages students in cross-curricular discussions and inspires them to identify and deeply explore issues and/or challenges that exist in the real world by considering multiple perspectives. Inquiry serves as the foundation for all student investigations in this course, as students practice and enhance their reading and interpretative skills and their abilities to scrutinize, synthesize, and communicate their own perspectives after considering multiple sources. Students choose research topics that encompass a broad range of ideas, including academic questions, global concerns, local or civic issues, or any specific areas of interest. Students then create evidence-based arguments, collaborate to consider different viewpoints and sharpen those arguments, and communicate their findings through oral and written reports both as part of a team and as individuals. The AP Seminar course assessments include two course-related performance tasks and one end-of-course exam. This course is recommended for students seeking to learn how to design and perform a research study and those seeking to improve their investigative, writing, and communication skills. **Prerequisite: Students must express interest in this course and request recommendation from a core-area (English, Math, Science, or Social Studies) teacher to enroll.**

395 Advanced Placement Research ♦ ●

(36 weeks, A/B schedule) 1 Credit | Grades 11, 12

AP Research is the final course of the AP Capstone program. AP Research allows students to profoundly explore an academic topic, problem, or issue of individual interest. Through this inquiry, students design, plan, and conduct a year-long research-based investigation to address a research question. Students build upon the skills acquired in the AP Seminar course by developing an understanding of research methodology, exercising ethical research practices, and retrieving, examining, analyzing, and synthesizing information as they investigate a research question. Students evaluate their skill enhancement, record their processes, and archive the artifacts of the development of their academic work in a portfolio. The course culminates in a scholarly paper of approximately 4000–5000 words and a presentation with an oral defense. **Prerequisite: Students must have successfully completed the Advanced Placement Seminar course.**

155 American Government, Citizenship, and Economics

(18 weeks) 1 Credit | Grade 12

The American Government, Citizenship and Economics course is built around six themes: Foundations, Institutions, Law, Impact on Political Thought, and the Principles of Economics. Within these themes, students are engaged in higher-level critical thinking activities to develop an understanding of the structure and purpose of our democratic system. The concepts of macro and micro economic theory, the structure and purpose of our democratic system, an emphasis on how our government functions, what consumerism, banking and investment impacts have on our government and its functions. Students' civic responsibility to serve their community, participate in the political

process and endeavor to be informed about our country's economics are emphasized in this course.

156 American Government, Citizenship, and Economics – Honors

(18 weeks) 1 Credit | Grade 12

The American Government, Citizenship and Economics course is built around six themes: Foundations, Institutions, Law, Impact on Political Thought, and the Principles of Economics. Within these themes, students are engaged in higher-level critical thinking activities to develop an understanding of the structure and purpose of our democratic system. The concepts of macro and micro economic theory, the structure and purpose of our democratic system, an emphasis on how our government functions, what consumerism, banking and investment impacts have on our government and its functions. Students' civic responsibility to serve their community, participate in the political process and endeavor to be informed about our country's economics are emphasized in this course. **Prerequisite: Teacher recommendation is required.**

155C American Government, Citizenship, and Economics – Online

(18 weeks) 1 Credit | Grade 12

The American Government & Citizenship course is built around six themes: Foundations, Institutions, Law, Impact on Political thought, Economics, and Citizenship. Within these themes, students are engaged in higher-level critical thinking activities to develop an understanding of the structure and purpose of our democratic and economic systems, while developing the citizenship skills necessary to allow them to be active, productive citizens in our society. Emphasis is placed on how government functions, and through these functions, how students have a civic responsibility to serve their community, participate in the political process, and endeavor to be informed and responsible economically minded citizens. This version of the course is offered as an asynchronous, cyber class. Regular due dates will be posted for all assignments; however, students will not be required to log-in for live sessions. Students may be required to report to school for assessments. Students who are potential NCAA athletes should speak to their counselor before enrolling in this course.

156C American Government, Citizenship, and Economics – Honors Online

(18 weeks) 1 Credit | Grade 12

The American Government & Citizenship course is built around six themes: Foundations, Institutions, Law, Impact on Political thought, Economics, and Citizenship. Within these themes, students are engaged in higher-level critical thinking activities to develop an understanding of the structure and purpose of our democratic and economic systems, while developing the citizenship skills necessary to allow them to be active, productive citizens in our society. Emphasis is placed on how government functions, and through these functions, how students have a civic responsibility to serve their community, participate in the political process, and endeavor to be informed and responsible economically minded citizens. This version of the course is offered as an asynchronous, cyber class. Regular due dates will be posted for all assignments; however, students will not be required to log-in for live sessions. Students may be required to report to

school for assessments. Students who are potential NCAA athletes should speak to their counselor before enrolling in this course. **Prerequisite: Teacher recommendation is required.**

181 21st Century Citizenship and Economics

(18 weeks) 1 Credit | Grade 12

This course is designed to satisfy course requirements in Social Studies at the twelfth-grade level and is recommended for students intending to enter the workforce, military, or technical/trade schools directly after high school. Students experience a thematically driven integrated course that develops civic and economic consciousness while emphasizing communication, collaboration, critical thinking, and creativity in a project-based environment. Students will be able to combine these citizenship and economic skills to become well-informed, well-rounded, productive citizens of our society.

183 American Law – Honors •

(9 weeks) .5 Credit | Grade 12

The primary goals of the American Law course are for students to gain an in-depth understanding of the structure, function, and purpose of civil and criminal law in America as well as an opportunity to use higher-level critical thinking skills to analyze, apply, and evaluate their understanding in real-world cases, scenarios, and situations. This is an honors level course.

Prerequisite: Teacher recommendation is required.

185 A People's History of America – Honors •

(9 weeks) .5 Credit | Grade 12

The primary goals of A People's History of America course are for students to gain an in-depth understanding of United States history from the perspective of the traditionally underrepresented cultural subgroups in American history, including Native Americans, Women, African Americans, Immigrants, etc. as well as an opportunity to use higher-level critical thinking skills to analyze, apply, and evaluate their understanding of these perspectives in both a historical and present-day context.

Prerequisite: Teacher recommendation is required.

184 History In Film •

(9 weeks) .5 Credit | Grade 12

The primary goals of the History In Film course are for students to gain an in-depth understanding of United States history through lens of the movies and media that portray it as well as an opportunity to use higher-level critical thinking skills to analyze, apply, and evaluate their understanding of these perspectives in both a historical and present-day context. Students will explore the connections, comparisons, and contrasts between historically themed films and their respective time periods in American and world history. This is an academic level course.

182 International Relations •

(9 weeks) .5 Credit | Grades 11, 12

This course is designed to give students an international dimension to the current social studies offerings. This course focuses on global and international issues and acquaints students with non-Western cultural, political, and social values. The students examine foreign policy, national security, inter-governmental organizations, and

international law. This course allows the students to participate in decision-making and problem-solving activities. This course serves college-bound students by preparing them for further international studies at the collegiate level or helps non-college-bound students develop a piece of fundamental knowledge about implementing international relations in a diverse, multicultural world.

168 Psychology – Honors •

(9 weeks) .5 Credit | Grades 11, 12

The Psychology – Honors course is an advanced study of psychological concepts, including learning and cognitive processes, sensation and perception, behaviorism, and developmental psychology. This course also includes an in-depth study of abnormal psychology, states of consciousness, and types of therapies. Honors students will be required to engage in a high level of reading, writing, and critical thinking activities to analyze, apply and evaluate these multiple psychological concepts.

Prerequisite: Teacher recommendation is required.

167 Psychology •

(9 weeks) .5 Credit | Grades 11, 12

The workings of the mind and body, learning and cognitive processes, the impact of sensation and perception, and the influence of motivation and emotion on behavior are central features of this course. No less important, however, are the explorations of behaviorism and developmental psychology, and the examination of personality theories. The course involves the student in decision making and problem-solving activities.

171 Sociology – Honors •

(9 weeks) .5 Credit | Grades 11, 12

This course focuses on key sociological issues affecting the role individuals and groups play in society. Students explore concepts that form the foundation of culture and how various factors affect changes in society. Students are also involved in discovering social patterns, causes of social inequality, and the effects of prejudice and discrimination in a diverse society. Students will explore theories of sociology such as structural function, symbolic interaction, and social conflict as well as the practical application of these concepts in society. **Prerequisite: Teacher recommendation is required.**

174 Social Issues in Today's World •

(9 weeks) .5 Credit | Grades 11, 12

This Sociology course is designed to provide students with an in-depth study of the social issues in today's world through the utilization of current events and the latest practical application of sociological concepts. Units of study will include Social Stratification, Family, Conformity, Crime/Deviance, Social Media and Global Issues. Students will be challenged to explore these concepts through the lens of our global society and apply what they've learned to develop solutions through problem-solving and inquiry-based learning.

Technology Education - STEM

If fees or expenses required of an elective class impose a financial hardship on the student, the school district will find alternative means to defray the cost. Students should contact their school counselor to assist with alternative fee payment.

Introduction to Technology

802 Introduction to Material Processes ♦ ●

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

This beginning level course is designed for students who enjoy the challenge of designing and making projects from various hardwoods. Hands-on experiences focus on design elements, machine safety, and production techniques. Group activities, problem solving, and product design are also covered. Students are required to pass a safety test prior to operating machinery. **A fee of \$10.00 will be charged for instructional materials used in projects kept by the student.**

803 Introduction to Design Engineering ♦ ●

(9 weeks) .5 Credit | Grades 9, 10, 11, 12

This beginning level course is designed for students who want to expand computer skills using CADD (computer aided drafting and design). Students design and create projects in the areas of construction and transportation technologies. Projects include floor plan design, model homes, and alternate-powered vehicles. Additional projects and activities include model rocketry, and CO2 car design and fabrication. An emphasis is placed on safety. **A fee of \$10.00 will be charged for instructional materials used in projects kept by the student.**

Drawing/CAD

812 Architecture I ♦ ●

(18 weeks) 1 Credit | Grades 10, 11, 12

This course is designed to introduce students to architecture utilizing traditional drafting techniques and computer aided drafting. Students produce a functional set of working drawings for a residential structure. Emphasis is placed on architectural design and problem solving. Students are encouraged to create unique works that reflect their personal interests and perspectives. Unique floor plans, elevations, section drawings, details drawings, and models are produced by each student. 3-D printing will also be introduced and used to produce prototype models. **A fee of \$20.00 will be charged for instructional materials used in projects kept by the student.**

816 Architecture II – Commercial and Green Construction ♦ ●

(18 weeks) 1 Credit | Grades 11, 12

This course is designed for students interested in continuing their educational experience in the field of architecture. Students use traditional drafting techniques and computer aided drawing to produce the working drawings needed to build commercial structures. Topics such as steel construction, concrete construction, and laminated engineered wood construction techniques are studied. Various types of working drawings are

produced such as floor plans, elevations, section drawings, and detail drawings; however, students are encouraged to explore personal interests to develop their own designs and ideas. An architectural portfolio is developed throughout this course. Green Construction focuses on current construction techniques, such as those developed for Project LEED. Energy savings, water efficiency, CO₂ emissions reduction, improved indoor environmental quality, efficient use of resources, and sensitivity to their impacts are studied. Students explore and develop advanced architectural application skills with a focus on residential construction. This class has an emphasis on producing professional quality drawings yet allows students to explore personal interests. Unique floor plans, elevations, section drawings, detail drawings and models are produced by each student. **A fee of \$20.00 will be charged for instructional materials used in projects kept by the student. Prerequisite: Architecture I**

814 Computer Aided Drafting and Design I ♦ ●

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

This course introduces students to computer aided drafting and design. Students learn to use the computer to generate 2-D and 3-D drawings. Emphasis is placed on problem solving, utilizing CADD functions and developing visual communication skills. Students also develop skills to create wireframe, surface modeling, and solid modeling drawings to produce realistic views of their projects. 3-D printing will also be introduced and used to produce prototype models. **A fee of \$20.00 will be charged for instructional materials used in projects kept by the student.**

815 Computer Aided Drafting and Design II ♦ ●

(18 weeks) 1 Credit | Grades 10, 11, 12

This course allows students who have successfully completed CADD I to explore and develop advanced computer application skills used for drafting and design. Students utilize many programs that are employed throughout the industry today and explore advanced processes such as modeling and simulation. 3-D printing will also be introduced and used to produce prototype models. This course is an extension of the CADD I course and focuses on advanced topics and concepts; emphasis is placed on student production of a professional quality portfolio that allows students to explore and reflect their personal interests. Instructional approaches provide students with a classroom laboratory activity-based experience. **A fee of \$20.00 will be charged for instructional materials used in projects kept by the student. Prerequisite: Computer Aided Drafting and Design I**

Metalworking

820 Metalworking ♦ ●

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

Metalworking offers all students the opportunity to expand on any previous metalworking experiences gained in middle school or Introduction to Technology classes. Through a balance of theory and hands-on activities, students become familiar with and

knowledgeable about various techniques, processes, and tools used within the hot and cold metalworking industries. These areas include forging, plasma cam technology, welding, machining, sheet metal forming, and layout. Each student goes through a process of designing, drawing, cost analysis, problem solving, and construction of a project. Projects may include bronze bells, hammers, engine stands, vises, gavel, cannons, weightlifting equipment, etc. **A fee of \$20.00 will be charged for instructional materials used in projects kept by the student.**

824 Metal Manufacturing Technology ♦ •

(18 weeks) 1 Credit | Grades 10, 11, 12

This course is designed for students interested in expanding on the experience and knowledge they acquired in the introductory metalworking course. Students work in small groups and individually to research, design, problem solve, communicate, and construct challenging and useful projects. In this process, students learn advanced techniques and processes used in the various metalworking and manufacturing industries. Projects may include small lathes, belt sanders, disc sanders, small cc engines, scroll saws, go-carts, and more. **A fee of \$20.00 will be charged for instructional materials used in projects kept by the student. Prerequisite: Metalworking**

Robotics, Transportation, & Power

828 Robotics and Applied Technology ♦ •

(18 weeks) 1 Credit | Grades 10, 11, 12

This course is designed with the engineer, inventor, and problem solver in mind. Students will apply scientific laws and principles to produce successful projects and challenges. Students will have the opportunity to work within small groups or as individuals bring ideas to life as they research, design and construct projects. Projects include Robotic challenges/competitions, advanced rocketry, CO2 dragsters and more. This course will expose students to the use of wind tunnels to measure drag, lift and use smoke trails to visualize aerodynamic principles; electronics to measure G-forces and speed and robotic components to create/perform specific tasks. Throughout the year students will explore the areas of mechanical power/advantage, hydraulics/pneumatics, electronics/electricity, aerodynamics, propulsion systems and robotics. **A fee of \$20.00 will be charged for instructional materials used in projects kept by the student.**

830 Robotics and Applied Technology II ♦ •

(18 weeks) 1 Credit | Grades 11, 12

This course is intended to build upon the knowledge and techniques gained in the first level robotics course. Students will pursue the study and use of RobotC language to program autonomous robots to perform various tasks/challenges. Students will work closely with robotic sensors such as: touch, sound, light, color, sonar, IR, temperature along with remote cameras and more when designing their robots for classroom challenges. Students will also have the opportunity to explore animatronics, automation, and advanced electrical/mechanical applications. **A fee of \$20.00 will be charged for instructional materials used in**

projects kept by the student. Prerequisite: Robotics and Applied Technology

Woodworking

837 Wood Technology I ♦ •

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

This course is for students who enjoy working with wood and who would like to know more about its use, fabrication, and artistic value. Emphasis is placed on the use of woodworking machinery, safety, problem solving, design technology, fabrication, finishing technology, and career options in the woodworking field. Students are required to pass a safety test and demonstrate their ability to use the machinery correctly. Design briefs are used as the method of instruction to increase technical skills, produce projects, accommodate individual needs, and develop an interest in woodworking in today's society. **A fee of \$20.00 will be charged for instructional materials used in projects kept by the student.**

841 Advanced Wood Technology II ♦ •

(18 weeks) 1 Credit | Grades 10, 11, 12

Advanced Wood Technology is designed for the student who has developed a continuing interest in wood technology and problem solving. In addition to experiences in handling wood, students are exposed to various facets of design technology and group experiences. **A fee of \$20.00 will be charged for instructional materials used in projects kept by the student.**

Prerequisite: Wood Technology I

842 Artistic Woodworking III – Honors ♦ •

(18 weeks) 1 Credit | Grades 11, 12

This course focuses on the creative application of woodworking skills and the use of the design process to create original works. Students develop and refine their creative problem-solving skills. Units of study include Introduction to the Creative Process, Art versus Craft, History – Contemporary and Historic, Influential Artists, Artistic Furniture Design, Wood Sculpture and Carving, Product Development Utilizing Design Loop, and Responding to and Evaluating Design. **A fee of \$20.00 will be charged for instructional materials used in projects kept by the student. Prerequisite: Advanced Wood Technology II**

846 Wood Manufacturing Technology IV – Honors ♦ •

(18 weeks) 1 Credit | Grades 11, 12

This fourth level course is for the student that wants to continue their growth in woodworking. Experiences will continue with portable power tools, along with stationary woodworking machinery. An emphasis will include computer numeric control (CNC) equipment. Projects will be designed using multiple production techniques that will produce jigs and fixtures to increase production. **A fee of \$20.00 will be charged for instructional materials used in projects kept by the student. Prerequisite: Artistic Woodworking III**

851 Acoustic Guitar Building ♦ ●

(18 weeks) 1 Credit | Grades 10, 11, 12

This course gives students an opportunity to build an acoustic guitar similar to the “parlor size” Martin 118. Students will continue to develop their luthier skills that they learned in Ukulele Building. Students will keep a journal throughout the course documenting their entire process. **A fee of \$20.00 will be charged for instructional materials used in projects kept by the student plus \$220.00 for the acoustic guitar. Prerequisite: Ukulele Building**

847 Electric Guitar Building ♦ ●

(9 weeks) .5 Credit | Grades 11, 12

This is a woodworking course that utilizes the creative process to give students the ability to build an electric guitar. You do not need to know how to play the guitar in order to build one. The student will design their own guitar body shape using Fusion 360 and then machine the body on the CNC. Students will keep a journal throughout the course documenting their entire process. **A fee of \$10.00 will be charged plus additional material costs for the electric guitar which is \$200.**

849 Ukulele Building ♦ ●

(9 weeks) .5 Credit | Grades 10, 11, 12

This is a woodworking course that utilizes the creative process to give students the ability to build ukuleles. You do not need to know how to play the ukulele in order to build one. Students will learn the fundamentals of building an acoustic instrument and it is the foundation for the Acoustic Guitar course. Students will keep a journal throughout the course documenting their entire process. **A fee of \$10.00 will be charged for instructional materials plus \$85 for the ukulele.**

World Language

Pennridge World Language courses allow students to study a language for several years so that the language can be used as another learning tool. The language being taught will be the language of the classroom. Beyond the expected learning of writing and speaking the language, students learn how people live in other parts of the world. While Pennridge emphasizes mastering one world language, successful world language students are encouraged to study a second world language.

5005 French I •

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

In this first-year French course, students learn the phrases and pronunciation essential for conversation. Fundamental vocabulary is presented such as numbers, colors, foods, activities, and the names of family members. Grammatical concepts are taught so that students are able to structure sentences and phrase questions and responses. Students learn about France's people and culture, as well as those of other French-speaking areas.

5006 French II •

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

In this course the fundamental skills of French I are reviewed to ensure a solid foundation from which to expand vocabulary and grammar. Through the four modes of communication (listening, speaking, reading, and writing) vocabulary and grammar become more complex. Topics explored include clothing, transportation, sports, seasons and related activities, daily routine, leisure and cultural activities, and health. Students are also introduced to verbs in the present tense and in the past tense. Students are expected to participate in original speaking and writing activities as the content being taught is designed to be used in true-to-life situations. Students continue to explore the French culture as well as the cultures of other French-speaking regions. **Prerequisite: French I (a "C" average or better is highly recommended)**

5007 French III •

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

In this course, students continue to expand their vocabulary to include such practical topics as more advanced health vocabulary, communications, travel, banking, regional foods and driving. Students learn many of the common questions and responses that are used in everyday conversation in English. Additional grammatical concepts are introduced to allow for more precise communication. Emphasis continues to be placed on learning about France and other French-speaking regions. **Prerequisite: French II (a "C" average or better is highly recommended)**

5008 French IV – Honors •

(36 weeks, A/B schedule) 1 Credit | Grades 10, 11, 12

French IV offers more specific and relevant vocabulary to allow students to discuss such topics as health care, hotels, using transportation, country and city vocabulary, holidays, everyday customs, leisure, and travel. More advanced grammatical concepts are presented to allow better communication. Using

French to communicate, whether by speaking or writing, is emphasized. Students continue to explore various cultural topics dealing with France and other French-speaking regions. **Prerequisite: French III (a "C" average or better is highly recommended)**

5010 Advanced Placement French Language and Culture • ■

(36 weeks, A/B schedule) 1 Credit | Grade 11, 12

Offered as a Dual Enrollment course through the University of Pittsburgh. Students who choose to register with the university have the opportunity to earn 3 college credits.

Advanced Placement French Language is designed for highly motivated and performance-oriented French students whose main objective is to develop intermediate-high to advanced proficiency in the four language skills: listening, speaking, reading, and writing. Students gain an understanding of the francophone world and their culture through exploration of the six AP Global Themes (Family, Technology, Beauty, Contemporary Life, World Challenges, and The Search for Self). A variety of literature selections, recordings, interviews, and television and radio broadcasts are used to develop these themes. Preparation for the AP French Language examination is provided through frequent practice opportunities. Students are encouraged to take the AP French Language examination in May. Students will decide whether they are taking this course as Dual Enrollment within the first 5 class meetings. **Prerequisite: French IV (a "B" average or better is highly recommended)**

5015 German I •

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

In German I, we emphasize communication skills in everyday life. Instruction focuses on situations such as greeting others, talking about ourselves and our lives, inviting friends to events, expressing emotions and opinions, and seeking information. Topics covered include: the family, free time activities, German schools, going to a cafe, and time in a typical German city. Students are engaged in motivating activities that develop their ability to use the language authentically. Activities focus on self-expression through creative thinking, speaking, and writing.

5016 German II •

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

After a review of German I material, students study vocabulary and grammar on a more advanced level. Continued emphasis is placed on listening, writing, and speaking skills. Students are expected to respond freely and to be involved in spontaneous language exchanges. Topics discussed in class include: clothing and fashion, festivals and holidays in the German speaking world, hobbies and entertainment, and traveling. A focus continues on the cultural heritage and issues of German-speaking regions. **Prerequisite: German I (a "C" average or better is recommended)**

5017 German III •

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

In German III, students continue to improve their capability in the German language. Students will begin reading longer selections

on various topics. While students continue to learn new grammar concepts, an emphasis will be put on debate, discussion, and student self-expression, both aloud and in writing. Activities are presented in various formats from teacher-directed activities such as translations and short answer exercises to open-ended activities such as projects based on student-selected topics, journal entries, and dialogues. Thematic units discussed during the course include vacationing in Europe, summertime activities, the typical German home, animals, and dining out. Assignments, oral and written, continue on a regular basis. **Prerequisite: German II (a “C” average or better is recommended)**

5018 German IV – Honors •

(36 weeks, A/B schedule) 1 Credit | Grades 10, 11, 12

The study of German vocabulary and structure prepares students for challenging literature and supplemental readings. Students polish and refine the four basic skills while exploring topics such as shopping, Oktoberfest and other local festivals, social media and technology, and professions. Creative oral and written activities as well as communication in the target language are emphasized. Brothers’ Grimm fairy tales will be read and analyzed in depth in the target language at the end of the year, and all conversation and activities will be conducted in German. **Prerequisite: German III (a “C” average or better is recommended)**

5019 German V – Dual Enrollment • ■

(36 weeks, A/B schedule) 1 Credit | Grade 11, 12

Offered as a Dual Enrollment course through the University of Pittsburgh. Students who choose to register with the university have the opportunity to earn 6 college credits.

This German language course is roughly equivalent both in content and difficulty to a college German language course. Along with an introduction into more difficult pieces of literature such as legends, short stories and plays, instructional content includes units on German history, as well as topics based in part on student interest and current events. Students learn from authentic texts, such as newspapers, magazines, and other contemporary works of literature. Students write journal entries and engage in debates on chapter themes; Oral proficiency is emphasized. Interested students are able to take the AP German test in May. Students will decide whether they are taking this course as Dual Enrollment within the first 5 class meetings. **Prerequisite: German IV (a “C” average or better is recommended)**

5025 Latin I •

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

This course provides students with the knowledge of grammar and vocabulary necessary to construct basic sentence patterns and to read and pronounce Latin with ease and understanding. Students use word derivation studies to increase their vocabulary. Students are also introduced to the original Roman pantheon of gods and Roman life and customs with special emphasis placed on Greek and Roman contributions to Western civilization. Students also use the Internet and other resources to create projects related to Roman culture.

5026 Latin II •

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

Students continue to develop skills with more advanced grammar and vocabulary necessary to construct and read more complex sentence patterns. Vocabulary, grammar, reading, and writing in Latin are emphasized in all content areas. Students use word derivation studies to increase their English vocabulary. Students continue their study of mythology, by following the mythical journey of ancient heroes, learn about the culture of Roman daily life, including the system of government and politics, and expand their knowledge on the Roman military. **Prerequisite: Latin I (a “C” average or better is recommended)**

5027 Latin III •

(18 weeks) 1 Credit | Grades 10, 11, 12

Students are encouraged to use the grammar concepts learned in Latin I and II, which are reinforced through reading, writing, and translation activities. Advanced grammar such as subjunctive is introduced. Vocabulary is based on thematic units which include heroes such as Ulysses, Jason and Theseus, exploration of the Roman Underworld, the study of Roman laws and its legal system, understanding the influence of the Ancient Greeks on overall Roman culture through theater, and an introduction of the hero Aeneas and the epic poem the Aeneid. **Prerequisite: Latin II (a “C” average or better is recommended)**

5028 Latin IV – Honors •

(18 weeks) 1 Credit | Grade 10, 11, 12

Students continue to practice their skills in writing Latin by reading and translating Roman authors representing a variety of literary styles. Students take an in-depth look and exploration of Rome during its days as both a republic and an empire. Vocabulary will continue to be based on thematic units which will include topics such as the reign of Augustus Caesar, Cicero, and the Triumvirate era. Students will also explore, translate, and learn about Latin poetry and read original works from authors like Ovid and Horace. **Prerequisite: Latin III (a “C” average or better is recommended)**

5035 Spanish I •

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

Students are encouraged to communicate by expressing coherent thoughts in simple, natural Spanish. Students learn the basic grammatical structure of the Spanish language in the present tense. Vocabulary is introduced in thematic units, including family, classroom objects, descriptions, food, weather, community, and common expressions. Vocabulary and grammar concepts are reinforced through basic writing, reading, speaking, and listening activities. Students develop an appreciation of contemporary Hispanic culture, particularly through the examination of the geography of Spanish-speaking countries.

5036 Spanish II •

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

Students reinforce and develop the basic skills mastered in Spanish I. They communicate using more complex sentence structures, including the use of past tenses and commands.

Students increase their vocabulary through the study of thematic units including animals, actions, parts of the body, emotions, food, clothing, and nationalities. Students develop creative expressions through free discussion and by composing dialogues and short essays using the grammar and vocabulary studied. Appreciation of the Hispanic culture is further developed, particularly through the study of holidays celebrated in the Spanish speaking world. **Prerequisite: Spanish I (a “C” average or better is highly recommended)**

5037 Spanish III •

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

Students gain a better understanding of the Spanish language with the introduction of advanced grammatical structures. Students use Spanish verb tenses to discuss events that occur in the past, present, and future. Students’ knowledge of vocabulary is strengthened through thematic units that highlight household chores, food, sporting events, and city destinations. Students employ both grammatical structures and vocabulary to participate in a variety of creative writing assignments and skits that emphasize student self-expression. Students’ awareness of Hispanic culture is enhanced through numerous short stories by Hispanic authors. **Prerequisite: Spanish II (a “C” average or better is highly recommended)**

5038 Spanish IV – Honors •

(36 weeks, A/B schedule) 1 Credit | Grades 10, 11, 12

Oral presentations, class discussions, group projects, and other creative uses of the language take students through a simultaneous grammar review and active conversation. Along with grammatical review, thematic units focus on travel, health and medicine, recreation, and home life. Students identify main ideas while reading selected works of literature. From simple sentence formation to organized essay writing, students communicate in written Spanish. Oral communication skills are increased by class activities in which students blend grammatical structures and vocabulary into dialogues and skits. **Prerequisite: Spanish III (a “C” average or better is highly recommended)**

5039 Spanish V – Honors •

(36 weeks, A/B schedule) 1 Credit | Grade 11, 12

Students practice writing in Spanish through journals and compositions. Readings include short stories, from the Romans to the present, in addition to current magazine and newspaper articles. Proficiency, self-expression, and creative use of the language are developed through a traditional grammar review and an introduction to the history of Spanish and Hispanic artists. Students use formal and informal spoken Spanish to communicate facts and ideas. This course does not prepare students for the AP Spanish Language examination. **Prerequisite: Spanish IV (a “C” average or better is highly recommended)**

5040 Advanced Placement Spanish Language and Culture •

(36 weeks, A/B schedule) 1 Credit | Grade 11, 12

Advanced Placement Spanish Language is designed for highly motivated and performance-oriented Spanish students whose main objective is to develop proficiency in the four language

skills: listening, speaking, reading, and writing. Students gain an understanding of Hispanics and their culture through a variety of literature selections, recordings, interviews, and television and radio broadcasts. Preparation for the AP Spanish Language examination is provided through frequent practice opportunities. Students are encouraged to take the AP Spanish Language examination in May. **Prerequisite: Spanish IV (a “B” average or better is highly recommended)**

Special Programs

576 Career Pathways

.5 Credit | Grades 9, 10, 11, 12

The Career Pathways program is designed to develop and enrich a student's career exploration goals while in high school. This program will be completed over a student's high school career. To earn the course credit, students will need to complete multiple career surveys, a career research project, attend several guest speaker events, visit workplaces and worksites, complete several job shadow experiences, as well as a culminating 20-hour mentorship in a desired career field or industry. The program is designed to allow students to discover a potential career while they are still in high school. Students may enroll in the program at any time. Students who successfully complete all course criteria will receive special recognition at the high school graduation ceremony.

2047 Career Internship Program

(18 weeks) .5 or 1 Credit | Grades 11, 12

.5 Credit = 45 hours of work per semester

1 Credit = 90 hours of work per semester

Students earn and learn in a paid internship experience. The program is delivered through the balanced combination of weekly classroom instruction and paid work-based experience. Career Internship students do not attend UBCTS. The classes are held at Pennridge. In addition to gaining work experience and high school credit, students are able to build elements of a career portfolio that will assist them with college and/or career readiness. Certifications: OSHA Safety Awareness and OSHA Employability Articulation: Bucks County Community College

English Language Development (ELD)

The English Language Development (ELD) program at Pennridge is an individualized program designed to assist non-English speaking students to learn, speak, use, and understand English at a functional and comprehension level. It also provides students with instruction in American culture. The ELD program helps students achieve their educational goals and function positively in American society by closing some of the cultural and linguistic gaps and by fully developing their intellectual potential. The goal of the ELD program is to facilitate the acquisition of English language skills of students whose native or first language is not English. The program is structured around the individual needs of the students and their level of English language acquisition. Students are placed in ELD courses based on the WIDA ACCESS Placement test (WIDA Screener) for newly enrolling students or the annual WIDA ACCESS assessment for returning or transferring students. All students enrolled in will also be enrolled in their grade level core English course.

- Students identified as Entering (WIDA score: 1) or Beginning (WIDA score: 2) will receive 2 hours of direct ELD instruction.
- Students identified as Developing (WIDA score: 3) will

receive 1-2 hours of direct ELD instruction.

- Students identified as Expanding (WIDA score: 4) will receive 1 hour of direct ELD instruction.
- Students identified as Bridging (WIDA score: 5) will receive up to 1 hour of ELD Instruction.

3041 English Language Arts & Development 1

(36 weeks, A/B schedule) 1 English Credit | Grades 9, 10, 11, 12

This course is designed for students who are learning English at the entering stages of English development. In this course students study the elements of fiction, drama, and poetry. Students have opportunities to read a variety of texts in and outside the classroom and continue to develop vocabulary for understanding and reading strategies to improve their writing and reading comprehension. Students continue to develop their writing and presentation skills by writing for different purposes and audiences as well as by using other sources to support their ideas. Students are encouraged to be independent readers and participate in classroom discussions and activities. Suggested for newcomer students and students who received a score of level 1 to low 2 on the WIDA tests.

3044 English Language Arts & Development 2

(18 weeks) 1 English Credit | Grades 9, 10, 11, 12

This course is designed for students who are learning English at the intermediate stages of English development. In this course students study the elements of fiction, drama, and poetry. Students have opportunities to read a variety of texts in and outside the classroom and continue to develop vocabulary for understanding and reading strategies to improve their writing and reading comprehension. Students continue to develop their writing and presentation skills by writing for different purposes and audiences as well as by using other sources to support their ideas. Students are encouraged to be independent readers and participate in classroom discussions and activities. Suggested for newcomer students and students who received a score of level 2 – 4 on the WIDA tests.

3050 Academic Literacy 1 •

(36 weeks, A/B schedule) 1 Credit | Grades 9, 10, 11, 12

Designed for non-English speaking students at the entering stages of English development. This course targets linguistic concepts and language skill development. Instruction targets linguistic concepts of lexical/word level, linguistic/sentence level, and language complexity/discourse level in the four domains of language: reading, writing, speaking and listening. Concepts are taught, both socially and academically, in order to improve access in the content curricula of math, science, social studies and/or English language arts. Suggested for newcomer students and students who received a score of level 1 to low 2 on the WIDA ACCESS or WIDA Screener.

3050A Academic Literacy 2 •

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

Designed for non-English speaking students at the beginning stages of English development. This course targets linguistic concepts and language skill development. Instruction targets linguistic concepts of lexical/word level, linguistic/sentence level,

and language complexity/discourse level in the four domains of language: reading, writing, speaking and listening. Concepts are taught, both socially and academically, in order to improve access in the content curricula of math, science, social studies and/or English language arts. Suggested for students who received a score of level 2 – 3 on the WIDA ACCESS or WIDA Screener.

3050B Academic Literacy 3 •

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

Designed for non-English speaking students at the developing, expanding, and bridging stages of English development. This course targets linguistic concepts and language skill development. Instruction targets linguistic concepts of lexical/word level, linguistic/sentence level, and language complexity/discourse level in the four domains of language: reading, writing, speaking, and listening. Concepts are taught, both socially and academically, to improve access in the content curricula of math, science, social studies and/or English language arts. Suggested for students who received a score of level high 3-5 on the WIDA ACCESS or WIDA Screener.

3043 ELD Science ♦

(18 weeks) 1 Science Credit | Grades 9, 10, 11, 12

This course targets general science topics with a focus on the essential principles of matter, energy, chemistry and components of life, and introductory physics. These topics will provide students with a strong foundation for subsequent study in Biology. Concepts are taught in a sequence and manner that will improve access to the content curricula and establish science literacy. This course allows students to construct basic understandings of science and its workings, to connect ideas or concepts across the many disciplines of science, and to apply their knowledge and skills through real-world experiences. **Prerequisite: Students must achieve a score of Level 1 – 2 on the WIDA ACCESS or WIDA Screener to be eligible for this course.**

Special Education Courses

411A English A

(36 weeks, A/B schedule) 1 Credit | Grades 9, 10, 11, 12

This course is designed for special education students who benefit from direct instruction within reading and writing. Students will study the elements of fiction, drama, and poetry. Students will read a variety of text and continue to develop their writing skills. This course is a modified version of the English I course. Placement in this course is based on a collection of data and teacher recommendation.

412B English B

(36 weeks, A/B schedule) 1 Credit | Grades 9, 10, 11, 12

This course is designed for special education students who benefit from direct instruction within reading and writing. Students will focus on the skills and strategies necessary to read, analyze, discuss, and write about works of American literature. This course is a modified version of the American Literature course. Placement in this course is based on a collection of data and teacher recommendation.

413C English C

(36 weeks, A/B schedule) 1 Credit | Grades 9, 10, 11, 12

This course is designed for special education students who benefit from direct instruction within reading and writing. Students will explore a variety of fiction and nonfiction texts written by authors from around the globe. This course is a modified version of the World Literature course. Placement in this course is based on a collection of data and teacher recommendation.

414D English D

(36 weeks, A/B schedule) 1 Credit | Grades 9, 10, 11, 12

This course is designed for special education students who benefit from direct instruction within reading and writing. Students will explore texts with themes driven to develop critical literacy skills and civic consciousness while focusing on communication, collaboration, critical thinking, and creativity. This course is a modified version of the 21st Century Literacy course. Placement in this course is based on a collection of data and teacher recommendation.

247A Math A ♦

(36 weeks, A/B schedule) 1 Credit | Grades 9, 10, 11, 12

This course is designed for special education students who benefit from direct instruction in mathematics. The approach of the class is to use hands-on techniques to show how algebra is developed and used. This course is a modified version of the Algebra IA course with an additional emphasis on basic math skills and a remedial review of previously learned math skills. Placement in this course is based on a collection of data and teacher recommendation.

248B Math B ♦

(36 weeks, A/B schedule) 1 Credit | Grades 9, 10, 11, 12

This course is designed for special education students who benefit from direct instruction in mathematics. This is the second course of a two-year Algebra I program. Students will review topics covered in Math A and continue with the application of algebra skills. This course is a modified version of the Algebra IB course with an additional emphasis on basic math skills and a remedial review of previously learned math skills. Placement in this course is based on a collection of data and teacher recommendation.

249C Math C ♦

(36 weeks, A/B schedule) 1 Credit | Grades 9, 10, 11, 12

This course is designed for special education students who benefit from direct instruction in mathematics. Students are introduced to formal reasoning and geometric exploration. This course is a modified version of Informal Geometry with an additional emphasis on basic math skills and a remedial review of previously learned math skills. Placement in this course is based on a collection of data and teacher recommendation.

250D Math D ♦

(36 weeks, A/B schedule) 1 Credit | Grades 9, 10, 11, 12

This course is designed for special education students who benefit from direct instruction in mathematics. Students will apply critical thinking skills to real world financial situations. Real world topics

covered will include income, money management, spending and credit, and savings and interest. This course is a modified version of the Personal Finance course with an additional emphasis on basic math skills and a remedial review of previously learned math skills. Placement in this course is based on a collection of data and teacher recommendation.

324A Biology IA ♦

(18 weeks) 1 Credit | Grades 9, 10

This course is designed for special education students who benefit from small group instruction and direct instruction in reading, writing, and mathematics. Students will explore a modified version of the first half of the Biology I course which focuses on various forms of life and their physical environments. Students will investigate foundations of life, cells and cell processes, and bioenergetics. Placement in this course is based on a collection of data and teacher recommendation.

324B Biology IB ♦

(18 weeks) 1 Credit | Grades 9, 10

This course is designed for special education students who benefit from small group instruction and direct instruction in reading, writing, and mathematics. Students will explore a modified version of the second half of the Biology I course which focuses on various forms of life and their physical environments. Students will investigate genetics, evolution, and ecology. Placement in this course is based on a collection of data and teacher recommendation.

3251 Earth & Environmental Sciences ♦

(18 weeks) 1 Credit | Grades 11, 12

This course is designed for special education students who benefit from small group instruction. Students will investigate aspects of weather, astronomy, minerals and rocks, geologic time, and surface features of the earth. Students will also study the relationships between humans and the world in which they live. This course combines modified materials from the Earth and Space Science and Environmental Science courses. Placement in this course is based on a collection of data and teacher recommendation.

3252 Physical Science ♦

(18 weeks) 1 Credit | Grades 11, 12

This course is designed for special education students who benefit from small group instruction. Students will study physical and chemical properties of matter, physical laws with a focus on energy and motion, and electricity and energy resources. Through classroom and laboratory experiences, students will develop the ability to observe and interpret scientific data with an emphasis on the kinetic theory of solids, liquids, and gases, gas laws, and solutions and chemical reactions. This course combines modified materials from the Principles of Science and Properties of Matter courses. Placement in this course is based on a collection of data and teacher recommendation.

114A History A

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

This course is designed for special education students who benefit from small group instruction. Students will study the political, social, and economic history and culture of the United States from the Age of Jefferson at the start of the 1800s to the turn of the century with the Progressive Era. Students will learn to analyze, interpret, and evaluate our country's history and culture. This course is a modified version of the Early American History course. Placement in this course is based on a collection of data and teacher recommendation.

115A History B

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

This course is designed for special education students who benefit from small group instruction. Students will study modern American history from the beginning of the 20th century with World War I through the Present Day. Students will develop skills in reading, note taking, verbal expression, and research. This course is a modified version of the Modern American History course. Placement in this course is based on a collection of data and teacher recommendation.

116A History C

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

This course is designed for special education students who benefit from small group instruction. Students will study government and economics in relation to the history and culture of modern world societies. Students will analyze, interpret, and evaluate the history and culture of a region and its impact on the world. This course is a modified version of the World History & Culture course. Placement in this course is based on a collection of data and teacher recommendation.

117A History D

(18 weeks) 1 Credit | Grades 9, 10, 11, 12

This course is designed for special education students who benefit from small group instruction. Students will develop an understanding of the structure and purpose of our democratic system. There will be emphasis placed on how students have a civic responsibility to serve their community, participate in the political process, and be informed and responsible citizens. This course will also provide an in-depth study of the social issues in today's world, utilizing current events and the latest practical application of sociological concepts. This course combines modified materials from the American Government and Citizenship course, as well as the Social Issues in Today's World course. Placement in this course is based on a collection of data and teacher recommendation.

793 Adapted Physical Education

(9 weeks, A/B schedule) .25 Credit | Grades 9, 10, 11, 12

This course is an adapted physical education program provided for students who are unable to participate in the regular physical education program for nine weeks or more because of physical or emotional reasons. **Prerequisite: Written note from a school psychologist or a physician and a teacher recommendation.**

Executive Functioning Skills and Strategies

(9 weeks or 18 weeks, A/B schedule) .5 Credit | Grades 9 (9001), 10 (9002), 11 (9003), 12 (9004)
(18 weeks or 36 weeks, A/B schedule) 1 Credit | Grades 9 (9009), 10 (9010), 11 (9011), 12 (9012)

This remedial period is provided for those students who are in need of academic remediation and have an Individualized Education Plan (IEP). These students receive services, including direct instruction of skills below grade level in the areas of math, reading comprehension, written expression, and executive functioning skills; this instruction will be delivered individually and/or small group instruction. Additional remediation and instructional support include activities such as: tracking of assignments, action planning, and instructional support completing assignments, projects, and tests/quizzes; progress monitoring; assistance, collaboration and communication about student performance including parents, student, and staff; and individually designed interventions for organization, test-taking, or other executive functioning needs. Placement of this course is determined by the student's Individualized Education Plan (IEP) team.

Essential Skills and Strategies

(9 weeks or 18 weeks, A/B schedule) .5 credit | Grades 9 (9005), 10 (9006), 11 (9007), 12 (9008)
(18 weeks or 36 weeks, A/B schedule) 1 credit | Grades 9 (9013), 10 (9014), 11 (9015), 12 (9016)

This remedial period is provided for those students who are in need of emotional remediation and have an Individualized Education Plan (IEP). These students receive services, including direct instruction on positive thoughts, positive actions, and positive feelings. Additional remediation and instructional support include activities such as: tracking of assignments, action planning, and instructional support completing assignments, projects, and tests/quizzes; progress monitoring; assistance, collaboration and communication about student performance including parents, student, and staff; and individually designed interventions for organization, test-taking, or other executive functioning needs. Placement of this course is determined by the student's Individualized Education Plan (IEP) team. Placement of this course is determined by the student's Individualized Education Plan (IEP) team.

490 Reading •

(36 weeks, A/B schedule) 1 Credit | Grades 9, 10, 11, 12

The purpose of this semester course is to provide an intensive, research-based program of direct instruction in reading to students in grades 9-12. This course is designed to provide students with practice in the strategies and skills necessary to succeed academically in content-area courses through an array of large-group instruction, small-group instruction, computer-based practice, and independent reading. Placement in this course is based on a collection of data and teacher recommendation.

Pennridge High School Gifted Education Program

The Pennridge High School Enrichment Learning Community (ELC) provides gifted students opportunities to engage in enrichment activities, which may include guest speakers, independent projects, field trips, interactive seminars, and other extracurricular ventures. Students are encouraged to participate in activities that engage their academic strengths and interests and offer new areas of exploration. Additionally, students are offered options for individual goals and support. All gifted students should enroll in the Gifted Canvas Course, which provides information and communication regarding the ELC and individual events.

Upper Bucks County

Technical School

The career and technical programs offered at UBCTS provide training that allows students to enter directly into the workforce with industry certifications, real-world work experience, applied learning, and college credit. Our students become lifelong learners and continue their post-secondary training through apprenticeships, technical schools, or colleges.

Each program has articulation agreements with post-secondary institutions, meaning students may obtain college credits for the high school work done at the technical school. All programs also offer one or more industry certifications that demonstrate a student's competency and make them more employable. Many institutions grant advanced standing based on a review of student transcripts and test-out options.

Students who wish to complement their technical training with business and entrepreneurial skills may take advantage of dual enrollment classes offered through Bucks County Community College. Students who meet rigorous technical standards and take two dual enrollment classes may graduate with 29 credits towards the Bucks County Community College Associate's Degree in Technical Entrepreneurship.

Check the Course Offering Booklet for the Upper Bucks County Technical School, available at www.ubtech.org or from the high school counselor. Our programs can accommodate students for 1, 2, 3, or 4 years. The UBCTS courses on skill levels 1 and 2 will receive an academic grade weight. Consult your school counselor for details.

UBCT45 Agricultural Technology & Life Sciences Academy ♦ **(1 Year) 4 Credits | Grades 9, 10, 11, 12**

Expand on your passion for Agriculture, Food, and Natural Resources by studying Animal Science, Plant Science, Biotechnology, and Food Science. The nationally recognized curriculum (Curriculum in Agricultural Science Education) provides the next generation of students with solid classroom instruction using rigorous and relevant STEM-based lessons while enhancing student learning through rigorous hands-on learning opportunities in the context of agriculture. Become prepared to leave high school with career and college-ready skills in the Agriculture, Food, and Natural Resources Career Cluster. Jobs fields supported in this cluster include expertise in animal production, agriculture genetics, laboratory techniques, manufacturing and production, plant production, quality assurance, and veterinary sciences (just to name a few). A bonus is college credits through Delaware Valley University & Rutgers University per year of completion in the program. Industry Certifications: OSHA 10 and CASE. *Articulation with Delaware Valley University, Rutgers University, and Bucks County Community College.*

UBCT8 Auto Collision Technology ♦

(1 Year) 4 Credits | Grades 9, 10, 11, 12

Students will develop skills in all areas of the collision field, from repairing minor dents to rebuilding the bodies of damaged vehicles, often using technology such as the Chief frame machine with a laser measuring system. Students are taught how to use and apply body filler and fiberglass materials. They will be able to apply all different types of paints, including primer/sealer, basecoat clear coat, single-stage paint, and pearlescent colors. Students will learn all the other welding and cutting procedures, design and installation of trim, cost estimation, and preparation for finish work. There is extensive training in metal, fiberglass, and plastics repair, metal straightening, auto refinishing, spray painting, and glass installation. This program has received national certification from NATEF (National Automotive Technicians Education Foundation). Industry Certifications: I-Car repair training program, S/P2, OSHA Certification, Automotive Service Excellence Certification (ASE). *Articulation with Bucks County Community College and Thaddeus Stevens College of Technology.*

UBCT10 Automotive Technology ♦

(1 Year) 4 Credits | Grades 9, 10, 11, 12

This course emphasizes technical knowledge and the repair of automobiles. Units of instruction include braking, emissions, engine, electrical, suspension, alignment, fuel, computerized fuel injection, and ignition systems. Students learn to locate and diagnose vehicle malfunctions using digital instruments and onboard computer systems, make repairs or adjustments, and complete periodic inspections for preventive maintenance. This program has earned national certification from NATEF (National Automotive Technicians Education Foundation). Industry Certifications: PA State Inspection, PA State Emission, Automotive Service Excellence Certification (ASE), Certified Emissions Inspector, Certified Safety Inspector Cat I, S/P2, Tire Repair Certification, OSHA Certification, and Automotive Youth Educational Systems (AYES). Services provided: Brake work, tire work, suspension work, state pre-inspections, oil changes, emission system diagnosis, and alignments. *Articulation with Bucks County Community College, Delaware County Community College, Harrisburg Area Community College, Northampton Area Community College, Lehigh Carbon Community College, Thaddeus Stevens College of Technology, and the University of Northwestern Ohio.*

UBCT314 Baking and Pastry Arts ♦

(1 Year) 4 Credits | Grades 9, 10, 11, 12

The Baking and Pastry Arts program will prepare students for gainful entry-level employment as a pastry cook assistant, baker, baker's assistant, cake artist, commercial production baker, baking kitchen assistant, store baker, artisan bread baker, baking caterer, institutional baker, small business owner or baker for online sales. The program operates its bakery, which provides students with authentic learning experiences. Students learn sanitation and safety, business math, baking fundamentals, nutrition, baking planning, and human relations. Industry Certifications: ServSafe Foodhandler, Servsafe Manager.

Services provided: Rise on Ridge Outlet Bakery. *Articulation with Bucks County Community College, Culinary Institute of America, Delaware County Community College, Montgomery County Community College, Northampton Community College, and Pennsylvania College of Technology.*

UBCT22 Carpentry ♦

(1 Year) 4 Credits | Grades 9, 10, 11, 12

Carpenters cut, fit and assemble wood and other materials to construct houses, buildings, decks, and many other structures. Most carpenters are skilled in both rough and finished carpentry. Rough carpentry includes framing, boarding, sheathing, and installing sub-flooring, partitions, and studding. Finish carpentry consists of installing finished flooring, stair work, siding, trim, wallboard, and hardware. This program holds certification from the Home Builders' Association (HBA). Industry Certifications: Pennsylvania Builders Association Skills Certificate, OSHA Certification, Ladder Safety. *Articulation with Bucks County Community College, Commonwealth Technical Institute at the Hiram G. Andrews Center, Delaware County Community College, Orleans Technical Institute, and Thaddeus Stevens College of Technology.*

UBCT67 Construction Technology ♦

(1 Year) 4 Credits | Grades 9, 10, 11, 12

Students learn the residential construction skills needed for a home building and remodeling career. Hands-on projects involve carpentry, electrical, plumbing, masonry, roofing, tile, drywall, painting, and more. Employment opportunities and apprenticeship programs in the field of construction are discussed. The Construction Technology program can lead to a Bachelor's Degree and a profitable career in Construction Management. This program holds certification from the Home Builders' Association (HBA). Industry Certifications: Pennsylvania Builders Association Skills Certificate and OSHA Certification. *Articulation with Bucks County Community College and Lehigh Carbon Community College.*

UBCT220 Computer Networking and Cybersecurity ♦

(1 Year) 4 Credits | Grades 9, 10, 11, 12

Students will obtain the knowledge and skills necessary to install, configure, administer, and support the primary services of Microsoft Windows Server operating systems. Students will also be introduced to virtual computing and its uses throughout the computer industry, as well as computer forensics, a branch of forensic science pertaining to legal evidence found in computers and digital media storage. Time in the course is also spent learning about network cabling technology. Industry Certifications: Certified Data Recovery Professional, CompTIA ITF, A+, Network+, and Security+, Microsoft Certified Solutions Associate for Windows 10, Microsoft Certified Solutions Associate for Windows Server 2016 and 2019, OSHA CareerSafe.

UBCT28 Cosmetology ♦

(1 Year) 4 Credits | Grades 9, 10, 11, 12

The exciting art and science of improving beauty through the care and treatment of skin, hair, and nails are called cosmetology. The

Cosmetology Program prepares students for the Pennsylvania Professional Licensing Examination and entry-level employment within the beauty industry. Cosmetologists shampoo, cut, style, lighten, tint and perform chemical texture services. They also may give manicures and pedicures, scalp and facial treatments, provide makeup analysis, and shape eyebrows. Students learn to schedule appointments with clients, and customer service, keep accurate records and sanitize and disinfect equipment and implements. These skills are practiced in our on-site beauty salon. Students earn hours to qualify for the State Board of Cosmetology licensing exam. Industry Certifications: Cosmetologist, Esthetician, Nail Technician, and OSHA Certification. Services provided: Services offered are similar to those provided in a salon. Appointments required. *Articulation with Bucks County Community College.*

UBCT352 Culinary Arts ♦

(1 Year) 4 Credits | Grades 9, 10, 11, 12

This program provides students with training in culinary arts and the experience of working in a commercial kitchen. In addition to developing culinary skills, students learn menu planning, nutrition, sanitation, service, and management. Students apply their culinary skills through catered events, grab-and-go meals, and food truck events. Industry Certifications: ServSafe Manager, ServSafe Food Handler, ServSafe Allergens, OSHA, and S/P2 Certifications. Services provided: The Rockridge Restaurant is a student-operated business focusing on grab-and-go meals and event catering. There are also opportunities for students to participate in the UBCTS Food Truck operation for community events. *Articulation with Bucks County Community College, Culinary Institute of America, Delaware County Community College, Harrisburg Area Community College, Lackawanna College, Pittsburgh Technical College, Montgomery County Community College, and Pennsylvania College of Technology.*

UBCT331 Dental Careers ♦

(1 Year) 4 Credits | Grades 9, 10, 11, 12

New technology has made dental care high-tech and exciting. In this course, students will gain the knowledge and skills necessary to assist in dental practice. Students will have the opportunity to practice these skills and gain the experience of working hands-on with various dental professionals in our on-site dental clinic. This experience enhances their abilities and gives the students the qualifications needed to seek immediate employment. It can also be a basis for further education in dental hygiene, laboratory technology, or dentistry. Industry Certifications: OSHA Certification, Dental Assisting National Board, and Radiation Health and Safety (RHS). Services provided: Dental Clinic by appointment only. *Articulation with Bucks County Community College, Harrisburg Area Community College, and Westmoreland County Community College.*

UBCT34 Diesel Equipment Technology ♦

(1 Year) 4 Credits | Grades 9, 10, 11, 12

The program emphasizes the skills to maintain all types of diesel-powered equipment; repair and maintain related equipment, including trucks, dozers, graders, and exploration equipment;

repair and maintain over-the-road trucks; work for dealerships and independent garages performing repairs or rebuilding; and work in related fields such as parts supply, warehousing, equipment sales or customer relations. The course includes hands-on training, introduction to heavy equipment technology, schematics, electrical/electronic theory, hydraulics, mathematics, interpersonal communications, system troubleshooting skills, computer skills, and heavy equipment repair and maintenance. Industry Certifications: Automotive Service Excellence Certification (ASE), Certified Safety Inspector Cat I & III, PA State Emission Inspection, S/P2, EPA Refrigerant, and OSHA Certification. Services provided: air conditioning services, clutch repair, brakes, electrical diagnosis & repair, and engine diagnostics. *Articulation with Bucks County Community College and the University of Northwestern Ohio.*

UBCT40 Electrical Technology ♦

(1 Year) 4 Credits | Grades 9, 10, 11, 12

This program incorporates theory and practical experience in generating and transmitting electricity. Students install and maintain communication, security, and other electrical systems using AC and DC circuits. Students are taught residential wiring and learn how a home is wired from start to finish. The National Electrical Code is also taught in conjunction with these wiring techniques. Electricity is used in commercial and industrial systems as well. These areas require such skills as blueprint reading, concepts of motors and generators, transformers, and working with motor control circuits. The electricity laboratory boasts a high-tech array of solid-state and conventional motor control training systems. This program holds certification from the Home Builders' Association (HBA). Industry Certifications: Pennsylvania Builders Association Skills Certificate, Ladder Safety, OSHA Certification, and Electrical Training Alliance/Interim Credentials - IBEW 1st Year Apprenticeship Coursework. *Articulation with Bucks County Community College, Lehigh Carbon Community College, Harrisburg Area Community College, Orleans Technical Institute, and Rosedale Technical College.*

UBCT12 Exercise Science & Sports Technology ♦

(1 Year) 4 Credits | Grades 9, 10, 11, 12

This program introduces students to the exercise science and sports technology industry. The program will prepare students for sports medicine, health care, and kinesiology careers. Students will learn medical terminology, safety procedures, nutritional facts, first aid, CPR/AED, basic anatomy, and kinesiology. In addition, they will learn theories of building exercise & rehabilitation programs, emergency care, injury recognition, prevention, and overall mental and physical health wellness. Units of study will include Health & well-being, legal/ethical issues, injury prevention, emergency care and infection control, treatment, rehabilitation, clinical skills, exercise science and prescription, human development, mental health, medical terminology, and anatomy & physiology. Industry Certifications: American Red Cross First Aid, CPR/AED, NOCTI, and OSHA Certification for Healthcare.

UBCT50 Graphic Communications ♦

(1 Year) 4 Credits | Grades 9, 10, 11, 12

Students in this program design, develop, and finish digital and printed products. Students use desktop publishing software to design various products digitally. Students use offset and digital printers to produce their work and finishing and bindery techniques to refine their finished products. The course prepares students for the changing technologies in the industry and will help prepare students for additional study at a college or university. Students operate sheet-fed printing presses, digital imaging equipment, and bindery machines. Industry Certifications: PrintEd Certifications (multiple areas), OSHA Certification, and Adobe. Services provided: Graphic design and production of displays and commercial printing for UBCTS, the community, and the sending school districts. *Articulation with Bucks County Community College and Thaddeus Stevens College of Technology.*

UBCT54 Health Care Careers ♦

(1 Year) 4 Credits | Grades 9, 10, 11, 12

The program is designed to introduce students to various health careers, teach students the necessary skills, knowledge, and attitude for a healthcare job, and prepare students for further education in selected professions. Classroom and laboratory instruction are combined with clinical experiences at local hospitals and residential care facilities to expose students to various health career choices. Industry Certifications: BLS Healthcare Provider, OSHA Certification, American Heart Association First Aid & CPR, Direct Care, AMCA- Medical Assisting. *Articulation with Bucks County Community College, Harrisburg Area Community College, Commonwealth Technical Institute at the Hiram G. Andrews Center, and Pennsylvania College of Technology.*

UBCT70 HVAC-R and Plumbing Technology ♦

(1 Year) 4 Credits | Grades 9, 10, 11, 12

HVAC-R (Heating, Ventilation, Air Conditioning – Refrigeration) and plumbing technicians install, troubleshoot, program, and repair residential and commercial environmental control systems. This program consists of competency-based classroom and practical experiences, enabling the student to learn the skills needed to obtain a satisfying career in HVAC-R. Industry Certifications: OSHA Certification, NORA, EPA, ICE. *Articulation with Bucks County Community College, Harrisburg Area Community College, Luzerne County Community College, Northampton County Area Community College, and Thaddeus Stevens College of Technology.*

UBCT362 Law Enforcement/Criminal Science ♦

(1 Year) 4 Credits | Grades 9, 10, 11, 12

Our communities require trained personnel to respond to emergencies, save lives, prevent harm and protect property. This innovative and timely course provides instruction and training in comprehensive public safety. Many students pursue a career in law enforcement, emergency medical, fire, or emergency management services. Related areas of employment include private security, industrial safety, and government agencies.

Industry Certifications: OCAT- Oleoresin Capsicum Aerosol Training, PATH- Practical and Tactical Handcuffing, OSHA Certification, Heartsaver CPR, Heartsaver First Aid, Heartsaver AED, Recognition & Identification of Hazardous Materials, Defensive Tactics, and NRA Basic Pistol. *Articulation with Bucks County Community College, Harcum College, Northampton County Community College, Delaware Valley University, and PA Highlands Community College.*

UBCT64 Machining Technologies ♦

(1 Year) 4 Credits | Grades 9, 10, 11, 12

The Machining and Engineering Technologies program offered at UBCTS provides a comprehensive approach to understanding the operations of a modern precision manufacturing environment. The Machining and Engineering lab uses precision machine tools that are moved manually or with automated CNC machines to process raw materials into products for medical, aerospace, military, and consumer products. Students will setup and operate an assortment of manual and CNC machine tools to obtain fundamental knowledge in areas such as CNC milling and turning, computer aided manufacturing (CAD/CAM), precision measurement, and 3D model design and prototype printing. There is a very high demand for machinists in every industry with exceptional earnings, job security, and professional growth. Industry Certifications: NIMS Machining Level I: CNC Milling; CNC Turning; Manual Milling; Manual Surface Grinding; Manual Turning Between Centers; Manual Turning with Chucking; Manual Drill Press; Measurement, Materials, and Safety; Planning, Benchwork, Layout; NIMS Machining Level II, OSHA Certification. *Articulation with Bucks County Community College, Delaware Valley Community College, Thaddeus Stevens College of Technology, and Reading Community College.*

UBCT68 Mechatronics ♦

(1 Year) 4 Credits | Grades 9, 10, 11, 12

The Mechatronics program offered at UBCTS provides a holistic approach to understanding the physics of automated work. Mechatronics focuses on machines controlled by programmable logic and powered by various forms of energy, such as electricity or pressurized fluids, such as air (pneumatic) and oil (hydraulic). Mechatronics workers design, troubleshoot, maintain and repair sophisticated automated equipment. Students will perform activities and obtain fundamental knowledge in the following areas: electrical, electronics, robotics, mechanical systems, fluid power systems, programmable logic controllers, and other control systems. Engineers and technicians trained in Mechatronics enjoy almost unlimited mobility across technical disciplines. Mechatronics* design and build robotic devices; * diagnose and repair sophisticated automated equipment; * communicate using machine language. Industry Certifications: AM/IST Level I, OSHA. *Articulation with Bucks County Community College,*

Delaware County Community College, Reading Area Community College, and Northampton County Area Community College.

UBCT100 Small Engine Technology ♦

(1 Year) 4 Credits | Grades 9, 10, 11, 12

Students learn to diagnose and repair small engines from 4hp to 300hp while studying all the parts and systems that work together to make an engine run. Students work on old and new technology, which includes gasoline, compact diesel, and electric. Motorcycles, snowmobiles, tractors, boats, and other equipment are serviced and repaired. The program comprises welding, fabrication, and basic knowledge about transmissions, hydraulics, drives, and aviation. Industry Certifications: OSHA 10 hour, EETC (2 strokes, 4 stroke, Electrical), Honda and Briggs & Stratton Master Service Technician, Stihl Bronze, SP2 Automotive safety, Husqvarna Equipment, Echo Equipment, and Aftermarket training through Powersports University. *Articulation with Bucks County Community College.*

UBCT4 Veterinary Assisting ♦

(1 Year) 4 Credits | Grades 9, 10, 11, 12

This program prepares students to be veterinary assistants. Many continue their education to become licensed veterinary professionals. Students will learn topics such as animal anatomy & physiology, pharmacology, animal nursing, and surgical preparation. Our small and large animal facilities allow students to gain experience and exposure to exotics, companion animals, and livestock. FFA, our student organization, is an integral part of the curriculum and provides the opportunity to develop leadership and team-building skills while participating in agriculture-based events and competitions. Ideally, incoming students should have a strong interest and background in science and math. Industry Certifications: OSHA Certification (Veterinary), Red Cross Pet First Aid & CPR, Youth for the Quality Care of Animals Program, Purina's Daily Nutrition Matters, Hill's Veterinary Nutritional Advocate. Services provided: Dog Daycare, Dog Grooming. *Articulation with Harcum College, Manor College, and Bucks County Community College.*

UBCT92 Welding and Fabrication Technology ♦

(1 Year) 4 Credits | Grades 9, 10, 11, 12

Students become skilled in all types of welding standards in our area, including metal cutting, forming equipment, flammable gasses, and hand/power tools. Students pursuing a welding career need excellent depth perception, fine motor coordination, sound judgment, good eyesight, and high math aptitude. Certification is recommended and is a common component of the course. This program is certified by the American Welding Society. Industry Certifications: AWS Certified Welder- Various Codes, Level I – Entry Welder, OSHA Certification. *Articulation with Bucks County Community College, Pennsylvania College of Technology, Lehigh Carbon Community College, Thaddeus Stevens College of Technology, and Northampton Area Community College.*

Career Pathways

<u>Arts & Communication Career Pathway</u>			
Description	Students interested in this career pathway will pursue courses that study how people process and document the human experience. Students interested in this career pathway will study topics such as philosophy, literature, religion, fine and practical art, music, history, and language. Students should have the following skills to maximize their success. For example, interpersonal (people) skills, communication skills, listening skills, time management, and empathy, among others. Sample careers include dancer, computer graphic designer, editor, stagehand, web designer, art director, musician, florist, composer, animator, interior designer, model, and advertising creator.		
Career Clusters	Performing Arts Audio/Video Technology Broadcasting Journalism Visual Arts Telecommunications Publishing Arts & Technology		
Suggested Elective Courses	184 History In Film 449 Media Production I 450 Media Production II 451 Film Production 454 College and Career Exploration and Skills 457 Creative Writing 462 Journalism 465 Theater Arts 481 Public Speaking 531 Entrepreneurship 560 Web Page Design 601 Introduction to Art 602 AP Art History 610 Advanced Art - Honors 615 AP Studio Art 620 Art and Design 625 Ceramics I 626 Ceramics II 630 Digital Design I 632 Digital Design II 633 Advanced 3D Animation 635 Photography I 636 Photography II 637 Drawing and Painting I 638 Drawing and Painting II 641 Sculpture	642 Introduction to 3D Animation 722 Sewing I 723 Sewing II 727 Fashion Marketing and Merchandising 728 Housing and Interior Design II 737 Food Preparation I 738 Food Preparation II 742 Housing and Interior Design I 746 Nutrition and Wellness 812 Architecture I 816 Architecture II – Commercial and Green Construction 910 Symphonic Band – Honors 911 Concert Band 913 Concert Orchestra 917 Chamber Orchestra – Honors 920 AP Music Theory 925 Music Composition and Theory 930 Music Technology I 931 Music Technology II 936 Electronic Keyboard Lab 937 Electronic Keyboard Labb II 938 Rock Band I 939 Mixed Choir	940 Guitar Studio 941 Music in Media 945 Rock Band II 950 Concert Choir – Honors 5005 French I 5006 French II 5007 French III 5008 French IV – Honors 5010 Advanced Placement French Language and Culture 5015 German I 5016 German II 5017 German III 5018 German IV – Honors 5019 German V – Dual Enrollment 5025 Latin I 5026 Latin II 5027 Latin III 5028 Latin IV – Honors 5035 Spanish I 5036 Spanish II 5037 Spanish III 5038 Spanish IV – Honors 5039 Spanish V – Honors 5040 Advanced Placement Spanish Language and Culture

Career Pathways

<u>Engineering, Industry, & Manufacturing Career Pathway</u>		
Description	<p>This Pathway is designed to cultivate students' interests, awareness and application to careers related to technologies necessary to design, develop, install, and maintain physical systems. Students will pursue courses that require the use of engineering and design process and advanced technologies to develop or improve upon an idea or product. Successful students in this pathway typically have the following skills: critical thinking, detailed oriented, problem solving, analytical skills, decision making, mechanical, and logical skills. Sample careers include architect, electrician, nuclear engineer, airline pilot, auto mechanic, civil engineer, heavy machine operator, draftsman, technical writer, and chemical engineer.</p>	
Career Clusters	<p>Construction Trades Architecture Science Technology Engineering Mathematics Manufacturing Transportation, Distribution, & Logistics</p>	
Suggested Elective Courses	<p>265 Computer Programming (with Python) – Honors 266 Advanced Placement Computer Science Principles 267 Advanced Placement Computer Science – A 368 Physics 1 371 Physics 1 – Honors 374 Engineering Physics – Honors 375 Advanced Placement Physics 1 376 Advanced Placement Physics 2 377 Advanced Placement Physics C 378 Advanced Placement Physics: Mechanics 379 Advanced Placement Physics: Electricity and Magnetism 449 Media Production I 450 Media Production II 454 College and Career Exploration and Skills 531 Entrepreneurship 560 Web Page Design 630 Digital Design I 632 Digital Design II 635 Photography I</p>	<p>636 Photography II 802 Introduction to Material Processes 803 Introduction to Design Engineering 814 Computer Aided Drafting and Design I 815 Computer Aided Drafting and Design II 816 Architecture II – Commercial and Green Construction 820 Metalworking 824 Metal Manufacturing Technology 828 Robotics and Applied Technology I 830 Robotics and Applied Technology II 837 Wood Technology I 841 Advanced Wood Technology II 842 Artistic Wood Technology III - Honors 846 Wood Manufacturing Technology IV – Honors 847 Electric Guitar Building 849 Ukulele Building 851 Acoustic Guitar Building 930 Music Technology I 931 Music Technology II 941 Music in Media</p>

Career Pathways

<u>Financial & Business Services & Information Technology Career Pathway</u>		
Description	Students interested in this career pathway will pursue courses that relate to the pursuit of a professional venture or worldwide learning opportunity. Students interested in this career pathway will study topics that relate to his or her own role in the global economy. The increasingly global and technology sophisticated business world provides a wide variety of rewarding business careers. Every company in every industry needs business professionals to operate efficiently. Valuable skills would include organizational, math, computer, reporting, managerial, and analytical skills. Sample careers include bank teller, chef, economist, payroll clerk, real estate agent, financial advisor, travel agent, software engineer, system analyst, computer programmer, and human resource manager.	
Career Clusters	Marketing Sales & Services Finance Human Resources Information Technology Business Management & Administration	
Suggested Elective Courses	167 Psychology 168 Psychology – Honors 169 Advanced Placement Psychology 182 International Relations 258 Advanced Placement Statistics 261 Statistics 265 Computer Programming (with Python) – Honors 266 Advanced Placement Computer Science Principles 267 Advanced Placement Computer Science – A 271 Decision Making in Sports – Dual Enrollment 297 Personal Finance 298 Personal Finance – Honors 449 Media Production I 450 Media Production II	451 Film Production 454 College and Career Exploration and Skills 481 Public Speaking 510 Accounting I 511 Accounting II – Dual Enrollment 519 Business Law 523 International Business 531 Entrepreneurship 536 Financial Foundations 539 Microsoft Specialist – Word & PowerPoint 541 Microsoft Specialist – Excel & Access 548 Introduction to Business 556 Sports & Entertainment Marketing 557 Sports & Entertainment Management 560 Web Page Design

Career Pathways

<u>Human & Family Services Career Pathway</u>		
Description	Students interested in meeting the needs of others and/or caring for others can find careers in the Pathway. Careers exist in areas related to all areas of individual, family, and community services are available. Government and military careers also exist in this Pathway. This pathway requires several key skills, including communication, leadership, mental preparedness, physical fitness, emotional intelligence, teamwork and collaboration and critical thinking. Sample careers include teacher, cosmetologist, crime lab technician, food service manager, lawyer, hotel manager, personal trainer, and mental health counselor.	
Career Clusters	Human Services Education & Training Government Public Administration Law Public Safety & Security Hospitality & Tourism	
Suggested Elective Courses	118 Advanced Placement Human Geography 145 Advanced Placement Government and Politics 155 American Government, Citizenship, and Economics 156 American Government, Citizenship, and Economics – Honors 167 Psychology 168 Psychology – Honors 169 Advanced Placement Psychology 171 Sociology – Honors 182 International Relations 183 American Law 184 History Through Film 258 Advanced Placement Statistics 261 Statistics 271 Decision Making in Sports – Dual Enrollment 297 Personal Finance 298 Personal Finance – Honors 341 Forensics 343 Criminalistics 344 Anatomy and Physiology 345 Criminology - Honors 454 College and Career Exploration and Skills 481 Public Speaking 510 Accounting I 511 Accounting II – Dual Enrollment 519 Business Law	531 Entrepreneurship 536 Financial Foundations 556 Sports & Entertainment Marketing 557 Sports & Entertainment Management 720 Child Development I 721 Child Development II 722 Sewing I 723 Sewing II 727 Fashion Marketing and Merchandising 728 Housing and Interior Design II 729 Exploring Family and Consumer Science 733 Family Life 737 Food Preparation I 738 Food Preparation II 742 Housing and Interior Design I 746 Nutrition and Wellness 781 Emergency Care: First Aid/CPR & AED Training 787 Civil Service and Military Fitness 792 Unified Physical Education 910 Symphonic Band – Honors 911 Concert Band 913 Concert Orchestra 917 Chamber Orchestra – Honors 939 Mixed Choir 950 Concert Choir – Honors 7912 Lifeguarding & Water Sports and Safety 7982 Officiating and Umpiring

Career Pathways

<u>Science & Health Career Pathway</u>		
Description	This Pathway is designed to cultivate students' interests in the life, physical and behavioral sciences. In addition, it involves the planning, managing, and providing of therapeutic services, diagnostic services, health information and biochemistry research and development. Students interested in this industry should possess the following skills: empathy, emotional, decision making, communication, integrity, time management, and organizational skills. Sample careers include home health aide, respiratory technician, geologist, animal caretaker, EMT, dietician, Veterinary technician, physician, sound engineer, marine biologist, and registered nurse.	
Career Clusters	Health Services Agriculture and Food Processing Food & Natural Resources Science Technology Math	
Suggested Elective Courses	167 Psychology 168 Psychology – Honors 169 Advanced Placement Psychology 231 Advanced Placement Calculus AB 233 Advanced Placement Calculus BC 236 Calculus – Honors 239 Multivariable Calculus: Calculus III – Honors 242 Algebra I 249 Algebra II 252 Algebra II – Honors 256 College Algebra – Dual Enrollment 258 Advanced Placement Statistics 261 Statistics 310 Biology I 313 Biology I - Honors 321 Advanced Placement Biology 323 Biology II – Honors 326 Chemistry I 329 Chemistry I – Honors 332 Chemistry II – Honors 339 Advanced Placement Chemistry 341 Forensics 343 Criminalistics 344 Anatomy and Physiology 345 Criminology – Honors 353 Astronomy and Geology 356 Earth and Space Science 362 Environmental Science I	365 Advanced Placement Environmental Science 368 Physics I 371 Physics I – Honors 374 Engineering Physics - Honors 375 Advanced Placement Physics 1 376 Advanced Placement Physics 2 378 Advanced Placement Physics: Mechanics 379 Advanced Placement Physics: Electricity and Magnetism 380 Principles of Science 383 Properties of Matter 390 Advanced Placement Seminar 395 Advanced Placement Research 454 College and Career Exploration and Skills 481 Public Speaking 531 Entrepreneurship 720 Child Development I 721 Child Development II 737 Food Preparation I 738 Food Preparation II 746 Nutrition and Wellness 781 Emergency Care: First Aid/CPR & AED Training 5025 Latin I 5026 Latin II 5027 Latin III 5028 Latin IV - Honors 7912 Lifeguarding & Water Sports and Safety

Graduation Planner

The following chart shows the graduation requirements for a **Standard Diploma** for the Class of 2028 and beyond. There are 32 credits maximum with 28 required for graduation. The shaded boxes below represent the graduation requirements for Pennridge High School.

Grade 9	Grade 10		Grade 11	Grade 12
English	English		English	English
Social Studies	Social Studies		Social Studies	STEM
Math	Math		Math	STEM
Science	Science		Science	Elective
Health & P.E.	Health & P.E.	Personal Finance	Arts & Humanities	Elective
Elective	Elective		Elective	Elective
Elective	Elective		Elective	Elective
Elective	Elective		Elective	Elective

The following chart shows the graduation requirements for a **Scholar's Diploma** for the Class of 2028 and beyond. There are 32 credits maximum with 30 required for the Scholar's Diploma. The shaded boxes below represent the requirements..

Grade 9	Grade 10		Grade 11	Grade 12
English	English		English	English
Social Studies	Social Studies		Social Studies	Social Studies
Math	Math		Math	Math
Science	Science		Science	Science
Health & P.E.	Health & P.E.	Personal Finance	Arts & Humanities	STEM
World Language	World Language		STEM	Elective
Elective	Elective		Elective	Elective
Elective	Elective		Elective	Elective



Pennridge High School
1228 N. Fifth Street
Perkasie, PA 18944