

Central Bucks School District Program of Studies 2020-2021 Grades 9-12



Updates to this booklet can be found online at www.cbsd.org

Central Bucks School District ~ 20 Welden Drive ~ Doylestown, PA 18901

Online version can click on course to go to course description page

NINTH GRADE COURSES.....	10	TECHNOLOGY AND ENGINEERING		5525 Web Design.....	18
ART	10	EDUCATION	13	5526 Advanced Web Design.....	18
8250 Exploring Drawing and Painting.....	10	6949 Engineering and Design.....	13	5668 College & Career Computer Skills	18
8954 Three-Dimensional Design.....	10	6950 Technical Drawing and Design	14	5170 Entrepreneurship	18
8366 Exploring Ceramics	10	6957 Communications Technology.....	14	ENGLISH	18
8460 Exploring Photography.....	10	6958 Engineering Processes	14	0000 Honors English 10	19
ENGLISH.....	10	WORLD LANGUAGES	14	0020 Academic English 10.....	19
0900 Honors English 9.....	10	4501 Spanish 1	14	0110 Advanced Placement English Language & Composition	19
0920 Academic English 9	11	4202 French 2.....	14	0100 Honors English 11	19
0970, 0980, 0990 English 9.....	11	4502 Spanish 2	14	0120 Academic English 11.....	19
FAMILY AND CONSUMER SCIENCES.....	11	HIGH SCHOOL COURSES	14	0200 Advanced Placement English Literature & Composition	19
6953 Sewing.....	11	ART.....	14	0210 Honors English 12	19
6954 Cooking for Life	11	8551 Art 1 – Introduction to Studio Art.....	14	0220 Academic English 12.....	19
HEALTH AND PHYSICAL EDUCATION .	11	8552 Art 2 – Intermediate Studio Art.....	14	0660 Becoming a Better Writer	19
7950 Physical Education/Health 9	11	8553 Art 3 – Comprehensive Studio Art	14	0601 Debate.....	20
INTEGRATED TECHNOLOGY	11	8500 Advanced Placement Art and Design .	15	0661 SAT/ACT Test Preparation –English ..	20
5639 Technology & Application Development	11	8554 Art 4 – Personal Directions in Studio Art and Portfolio	15	0662 Journalism.....	20
MATHEMATICS	11	8360 Introduction to Ceramics	15	0665 Creative Writing.....	20
2900 Honors Algebra 2/Trigonometry	11	8361 Ceramics 1.....	15	0668 Theater: Acting Workshop.....	20
2901 Geometry/Trigonometry.....	12	8362 Ceramics 2.....	15	0602 The Language of Food	20
2915 Algebra 1.....	12	8363 Ceramics 3.....	15	0603 Sports Literature.....	20
2916 Algebra 1 B	12	8251 Drawing and Painting 1	15	0673 Introduction to Film Studies	20
2920 Algebra 1A.....	12	8252 Drawing and Painting 2	15	0674 Media Production 1.....	21
2970, 2980, 2990 Mathematics 9.....	12	8461 Photography 1	15	0675 Media Production 2.....	21
MUSIC	12	8462 Photography 2	16	0676 Media Production 3.....	21
8969 Guitar 9	12	8463 Photography 3	16	0678 Media Production Practicum	21
8965 Band 9.....	12	8464 Photography 4	16	FAMILY AND CONSUMER SCIENCES	21
8967 Chorus 9.....	12	8562 Computer Graphics: Illustration and Graphic Design	16	6159 The Young Child	21
8966 Orchestra 9.....	12	8564 Digital Imaging	16	6161 The School-Age Child	21
PEN (Gifted Program).....	13	8567 Introduction to 3D Modeling and Animation	16	6162 Adult Living	21
9901 PEN Seminar 9	13	BUSINESS AND INTEGRATED TECHNOLOGY	17	6264 American Cuisine.....	22
READING.....	13	5160 Accounting 1.....	17	6265 Global Gourmet	22
4940 Reading 9	13	5260 Accounting 2.....	17	6266 Food Science	22
4970, 4980, 4990 Reading 9.....	13	5161 Business Administration.....	17	6267 Nutrition.....	22
SCIENCE	13	5061 Business Today.....	17	HEALTH AND PHYSICAL EDUCATION ..	22
3900 Honors Science 9.....	13	5660 Consumer Law & Business Ethics.....	17	7061 PE/Health	22
3920 Academic Science 9.....	13	5661 Marketing & Advertising Fundamentals	17	7062 PE/Health	22
3970, 3980, 3990 Science 9	13	5667 Sports & Entertainment Marketing.....	17	7069 Stress Management and Healthy Living	22
SOCIAL STUDIES	13	5062 Personal Finance	17	7562 Advanced Health	22
1900 Honors United States History	13	5163 Business Computer Applications.....	17	7064 Team Sports	22
1920 Academic United States History	13	5561 Digital Marketing.....	17	7065 Lifetime Sports.....	22
1970, 1980, 1990 United States History.....	13			7066 Personal Fitness	22

7063 Fitness Trends	23	SCIENCE.....	30	1162 Introduction to the Law.....	36
7068 Aquatics	23	3010 Honors Biology	30	1163 Geography.....	36
7060 Unified Physical Education	23	3020 Academic Biology	30	TECHNOLOGY & ENGINEERING EDUCATION	
MATHEMATICS	23	3040 Practical Biology.....	30	.....36	
2540 Algebra 1A.....	24	3100 Advanced Placement Biology.....	31	6360 Exploratory Architectural Design	36
2640 Algebra 1B	24	3130 Human Anatomy and Physiology	31	6361 Architectural Design 1	36
2645 Geometry	25	3122 Applied Human Anatomy and Physiology	31	6362 Architectural Design 2.....	36
2141 Algebra 2.....	25	.....	31	6363 Architectural Design 3.....	36
2541 Applied Mathematics.....	25	3110 Honors Chemistry.....	31	6560 Exploring Engineering and Architecture.....	36
2122 Geometry/Trig.....	25	3120 Academic Chemistry	31	6561 Engineering and Architecture 1.....	36
2520 Algebra 2/Trig.....	25	3140 Conceptual Chemistry.....	31	6562 Engineering and Architecture 2.....	37
2530 Honors Algebra 2/Trigonometry	25	3101 Advanced Placement Chemistry.....	32	6563 Engineering and Architecture 3.....	37
2221 Algebra 3/Trig	25	3101B – Advanced Placement Chemistry	32	6460 Exploratory Materials Engineering	37
2110 Precalculus/Trig.....	25	Partnership Program	32	6461 Materials Engineering 1.....	37
2111 Honors Precalculus/Trig.....	25	3201 – Biotechnology Research Practicum... 32		6462 Materials Engineering 2.....	37
2625 Statistics and Data Analysis	26	3224 Academic Physics	32	6463 Materials Engineering 3.....	37
2101 Calculus 1	26	3225 Honors Physics.....	32	6721 Engineering 1.....	37
2103 Calculus 2	26	3102 Advanced Placement Physics: Newtonian	32	6722 Engineering 2.....	37
2005 Advanced Placement Computer Science A	26	Mechanics	32	WORLD LANGUAGES.....	
.....	26	3103 Advanced Placement Physics: Electricity &	33	4101 Chinese 1	38
2007 Advanced Placement Computer Science	26	Magnetism	33	4102 Chinese 2	38
Principles	26	3640 Astronomy/Space Exploration	33	4103 Chinese 3	38
2102 Advanced Placement Calculus AB	26	3643 Oceanography	33	4501 Spanish 1	38
2200 Advanced Placement Calculus BC	26	3118 Environmental Sustainability	33	4502 Spanish 2	38
2601 Advanced Placement Statistics	27	3108 Advanced Placement Environmental Science	33	4203 French 3	38
9103 Algebra Lab	27	.....	33	4503 Spanish 3	38
2003 Introduction to Computer Programming.....	27	3213 Forensic Science.....	33	4213 French 3, Honors	38
2004 Introduction to Java.....	27	SOCIAL STUDIES, INCLUDING HISTORY AND		4513 Spanish 3, Honors	38
2623 SAT/ACT Test Preparation—Math.....	27	THE SOCIAL SCIENCES.....		4204 French 4	39
MUSIC	27	.....		4504 Spanish 4	39
8630 Music Creation, Production and Marketing	27	1101 Advanced Placement European History.....	34	4514 Spanish 4, Honors	39
.....	27	1111 Honors Modern World History.....	34	4214 French 4, Honors	39
8640 Musical Theater and Tech.....	27	1120 Academic Modern World History	34	4505 Spanish 5	39
8663 Concert Band.....	28	1000 Advanced Placement U.S. History	34	4500 Advanced Placement Spanish	39
8660 Symphonic Band.....	28	1012 Honors American Government and Economic	34	4200 Advanced Placement French	39
8665 Jazz Ensemble.....	28	Systems.....	34	4401 Latin 1	39
8661 Chorus—Grade 10	28	1022 Academic American Government and Economic	34	4402 Latin 2	39
8662 Choir—Grades 11, 12.....	28	Systems	34	4403 Latin 3	40
8664 Orchestra.....	28	1203 Advanced Placement Comparative Government	35	4522 Study Abroad: France (Summer of 2022).....	40
8667 Music Theory.....	29	.....	35	4521 Study Abroad: Spain (Summer of 2021).....	40
8620 Music Technology.....	29	1210 Honors Global Relations	35	YEARBOOK.....	
8600 Advanced Placement Music Theory.....	29	1220 Academic Global Relations.....	35	.....40	
PEN (Gifted Program).....	29	1201 Advanced Placement Microeconomics.....	35	9568 Yearbook Production—CB South/CB West	40
9600 PEN—Grades 10–12	29	1202 Advanced Placement Macroeconomics.....	35	.....	40
		1300 Advanced Placement Psychology	35	9569 Yearbook Production—CB East.....	40
		1160 Psychology	35		
		1161 Sociology	36		

CENTRAL BUCKS MIDDLE SCHOOLS~GRADE 9

HOLICONG MIDDLE SCHOOL

2900 Holicong Road
Doylestown, PA 18902

Dr. Kevin T. Shillingford, Principal

Marykate Blankenburg, Barbara Louderback,
Gregory Striano, Counselors
(267) 893-2700

LENAPE MIDDLE SCHOOL

313 West State Street
Doylestown, PA 18901

Geanine N. Saullo, Principal

Marykate Blankenburg, Courtney Nolan, Jodi
Schmon, Counselors
(267) 893-2800

TAMANEND MIDDLE SCHOOL

1492 Stuckert Road
Warrington, PA 18976

Dr. Brian Caughie, Principal

Mandy Cammann, Jeffrey Klein, Counselors
(267) 293-2900

TOHICKON MIDDLE SCHOOL

5051 Old Easton Road
Doylestown, PA 18902

Kevin R. Marton, Principal

Diane Schute, Joseph Stryker, Counselors
(267) 293-3300

UNAMI MIDDLE SCHOOL

160 South Moyer Road
Chalfont, PA 18914

Dr. Chad M. Watters, Principal

Kathleen Houpert, Kate Mallon, Counselors
(267) 893-3400

CENTRAL BUCKS HIGH SCHOOLS~GRADES 10-12

CENTRAL BUCKS HIGH SCHOOL-EAST

2804 Holicong Road
Doylestown, PA 18902

Lori L. Gallagher-Landis, Principal

George Moustakas, Guidance Coordinator; Tanya
Barone-Durant, Nancy Flanagan-Kelly,
Melanie Jones, Marilyn Russo, Walter Sandstrom,
Counselors
(267) 893-2300

CENTRAL BUCKS HIGH SCHOOL-SOUTH

1100 Folly Road
Warrington, PA 18976

Jason H. Bucher, Principal

Laura Ladley, Guidance Coordinator;
Taryn Barrett, Karen Davis, Thomas Hill,
Michele McGrogan, Kerry Monk, Counselors
(267) 893-3000

CENTRAL BUCKS HIGH SCHOOL-WEST

375 West Court Street
Doylestown, PA 18901

Timothy P. Donovan, Principal

Lisa Corr, Guidance Coordinator; Lori Bagnick,
Michael Curtis, Donna Dallam, Valerie D'Alonzo,
David Manners, Counselors
(267) 893-2500

Area Career and Technical School GRADES 9-12

MIDDLE BUCKS INSTITUTE OF TECHNOLOGY

2740 Old York Road
Jamison, PA 18929

Kathryn Strouse, Administrative Director
Stephanie Gregory, Laurinda Hellwig, Counselors
(215) 343-2480

General Information

Planning Your Program

Planning a four-year program is a serious undertaking. Although some of your courses are required, you will have many choices to make during your years of school. The courses you request will be guided largely by your plans for the future. **Whatever your plans, you should be taking the most challenging courses you can within your academic abilities.**

Some students are sure of their future plans; others are not. It is common for young people to change their minds about which career to choose. The important thing is to choose as rigorous a program as possible, so you don't limit yourself if you change your mind about college or career plans. Sometimes it seems overwhelming to have so many choices to make. Although scheduling is primarily your responsibility, you will have plenty of help from your counselor, your teachers, and your parents.

Your school counselor can provide detailed information about academic programs, graduation requirements, college admissions, technical programs, and scheduling options. Your teachers can help you decide whether you have the ability for a particular course and will recommend students for specific programs. Your parents can provide guidance about your plans for the future, and they must approve your final course request.

Scheduling decisions are important. Counselors and administrators work during the summer to provide a schedule that tries to accommodate the needs of all students. If it is impossible to schedule all course requests. **Once the schedule has been established, it may be impossible to honor a change request because classes have been fixed and teachers have been assigned—so choose carefully.**

Recommended Course Sequences

Under the English, Math, Science, Social Studies and World Language sections in Grades 10–12, you will find recommended course sequences for the Most Rigorous Program and the Academic Program.

The **Most Rigorous Program** is recommended for college-bound students with high achievement and interest in a particular academic area. Students who are planning to apply to the most selective colleges should select courses in one or more subject areas from this sequence. Very competitive colleges look for students who take a district's most challenging courses. If you plan to apply to very selective schools, you should be choosing courses from the most rigorous sequences. Every year, returning alumni from a variety of colleges comment that their high school Advanced Placement courses not only helped to prepare them for taking a particular college subject, but also helped them in general to prepare for the large amount of reading and writing required in college.

Courses in the **Academic Program** have been designed with the rigor necessary for students who are planning to attend college. Students applying to very competitive schools may also want to select some of their courses from the Most Rigorous Program.

High School Block Scheduling

The district's high schools use a block scheduling model. The year is divided into four nine-week terms or marking periods. Students take four courses each marking period, and each course is scheduled for 90 minutes. Block scheduling allows students to concentrate on four subjects at a time without feeling rushed from one subject to another. The longer learning period each day gives students an opportunity to practice what they have just learned; a science lab, for example, can follow the lesson in the same period instead of being scheduled for another day. Because one can take the equivalent of eight full-year courses instead of the seven under the traditional system, students have more opportunities to accelerate course sequence and take additional courses in the areas that are most important to them.

Courses are taught for nine, 18, 27 or 36 weeks. Nine-week courses, generally electives, are equivalent to a half-credit. Eighteen-week courses are equivalent to 1.0 credit. 27-week courses are equivalent to 1.5 credits and 36-week courses are equivalent to 2 credits.

Many Advanced Placement courses are 18 weeks in length; however, some AP courses in Social Studies, Calculus, and English Literature are 27 weeks long. AP courses in Biology and Chemistry are 36 weeks long.

PE/Health is taught either for nine weeks or every other day for 18 weeks. Music performance courses (band, orchestra, choir, jazz ensemble) are scheduled for a full year but on an A/B schedule (every other day). We do offer a limited number of courses on an A/B schedule which run opposite the music courses.

It is important to map out a four-year plan. Please refer to the worksheets in the back of this booklet.

Here are some sample schedules to give you an idea how block scheduling works. The courses listed are only examples—your schedule may look very different.

Grade 10				
	1st MP	2nd MP	3rd MP	4th MP
1	Draw/Paint 1	American Cuisine	Creative Writing	PE/Health
2	Spanish 3		Academic Biology	
3	Algebra 2/Trig		English 10	
4	Modern World History		Business Today	
Grade 11				
	1st MP	2nd MP	3rd MP	4th MP
1	Psychology	Marketing	Astronomy	SAT/ACT Prep
2	Spanish 4		Academic Chemistry	
3	PreCalculus/Trig		English 11	
4	American Government		Ceramics 1	
Grade 12				
	1st MP	2nd MP	3rd MP	4th MP
1	Academic Physics		English 12	
2	Choir/Study Hall	Choir/Study Hall	Choir/Music Theory	Choir/Music Theory
3	Global Relations		Spanish 5	
4	Calculus 1		Art 1	

Here is a sample of a schedule for a student who attends Middle Bucks Institute of Technology in Grade 10. The MBIT program may be scheduled in the morning or afternoon. This example shows MBIT in the morning.

Grade 10				
	1st MP	2nd MP	3rd MP	4th MP
1	MBIT Program		MBIT Program	
2	MBIT Program		MBIT Program	
3	Modern World History		Academic Biology	
4	English 10		Geometry/Trigonometry	

Minimum Course Requirements

Students in senior year may have no more than one block each marking period as study hall (early release or late-arrival). Central Bucks recommends that students take a rigorous course load based on their post-secondary career goals and plans.

Course Requests

All course requests will be reviewed with you, your teachers, and your parents. When you and your parents approve the courses listed on your Verification Report at the end of your Program Planning, consider that to be your final course request. **Courses must have a sufficient enrollment in order to be offered. If a course you requested will not be offered, another course will be selected from your alternate courses.**

Course Change Policy

Changes in course requests will only be honored for the following two reasons: (1) failure to meet the required prerequisite; or (2) a level change that must be approved by the principal.

Course Withdrawal

In the rare case that a student has been inappropriately placed in a course, the following procedures shall apply:

- If the withdrawal occurs during the first three classes of a nine-week course or the first five classes for an 18, 27, or 36-week course, the course will be removed from the records.
- If the withdrawal occurs after the fifth class for an 18, 27, or 36-week course (first three classes for a 9-week course) but before the midpoint of the course, a grade of W+ (passing) or W- (failing) will be recorded in the marking period column and in the final grade column on your report card and transcript.
- If the withdrawal occurs after the midpoint and is passing, the final course grade will be W+; if the student is failing, then the final course grade will be an F.

Graduation Requirements

(1) Course Credits. All students are required to earn a minimum number of credits by successfully completing the performance assessments and the course work in the assigned curriculum areas as specified on the Required Graduation Credit Distribution chart on the following page.

Students have the ultimate responsibility of meeting all graduation requirements. You should periodically check your credit status and consult with your school counselor if you have any questions. Credit status can be checked on the Portal.

(2) Performance Assessments: All students are required to successfully complete all required components of Success Plan 9-12. Students will receive .25 Performance Assessment credit upon successful completion of SP9, and then will receive .25 credit upon completion of SP11.

(3) Core Assessments. Each student is required to complete core assessments in math, science, English, social studies, and PE that verify achievement of academic standards at the proficient level or above.

(4) Keystone Exams. The Keystone Exams are end-of-course assessments designed to assess proficiency in the subject areas of Algebra I, Literature, and Biology. Students must demonstrate proficiency on these exams. Students who are not proficient on an exam may retake the exam until they demonstrate proficiency. Proficiency on these exams is a graduation requirement in the state of Pennsylvania for the Class of 2022 and beyond.

Summer School Courses

Students who wish to repeat a course not successfully completed during the regular school term may fulfill certain graduation requirements by attending summer school. The original course will remain on the student's transcript in addition to the summer school course taken for remediation. **Note: Some ninth-grade courses, such as English and social studies, are not offered in high school. Students who fail a 9th grade course are required to register and pay for an online course.**

Credit by Alternative Methods

Students may request consideration for credit by alternative methods for a planned course through evaluation, online course, and college courses. Details are specified in School Board Policies 217.1, 217.2, and 217.3.

Credit by alternative methods requires the application to be submitted and signed by parents **by May 1st**. Final approval will be needed by specified school staff members and the principal. See your counselor for details. **A weighted grade will not be given for credit through alternative methods.**

Required Graduation Credit Distribution

Subject	Standard Diploma	MBIT/Standard Diploma	Scholar's Diploma
English	4.00	4.00	4.00
Mathematics	4.00	4.00	4.00
Science	2.00	2.00	3.00
Biology	1.00	1.00	1.00
Social Studies	4.00	4.00	4.00
World Language			2.00
Electives	10.75	11.25	8.75
PE/Health	1.00	.50	1.00
Performance Assessment	.50	.50	.50
Total Credits	27.25	27.25	28.25

A minimum of one credit per year is required in English. Please refer to the graph in the subject section of this guide for the courses that will meet these yearly requirements.

Students are eligible to receive a Scholar's Diploma at graduation if they meet the following criteria by the end of Senior year: 1) a 3.4 cumulative GPA; 2) completion of 3 AP courses; 3) completion of 3 science courses in addition to Biology; and 4) completion of two World Language courses.

In Central Bucks School District, we follow state guidelines that allow up to one credit from Computer Science courses to be used to fill your graduation requirements for mathematics. The Computer Science courses that may be used for one of the math credits include Introduction to Computer Programming (0.5 credit), Introduction to Java (0.5 Credit), AP Computer Science A (1 credit), or AP Computer Science Principles (1 credit).

Electives include all subject areas. When a requirement in a specific area has been satisfied, any additional courses taken in that subject area will apply toward the Elective credit requirement. For example, if a student completed 4 credits in science the last course taken applies to the Elective requirement.

In accordance with state regulations for high school graduation requirements, beginning with the Class of 2022, students must demonstrate proficiency on the Keystone Exams in Literature, Algebra 1, and Biology.

Special Education

The Individual Education Plan (IEP) developed by parents and school personnel outlines the program for students in special education. The IEP describes both the regular education and special education courses in which students should enroll. A transition plan is also part of each student's IEP. The purpose of this plan is to outline the steps being taken to assist in student preparation for life after graduation.

Students involved in special education may also attend Middle Bucks Institute of Technology. Students interested in a Middle Bucks program should talk to their counselor and special education teachers. Special education students may also participate in a work-study program. Upon completion of the senior high special education program, students will be recommended for graduation with a Central Bucks diploma.

Gifted Education (PEN)

PEN, or Program for Enrichment, is an elective class for students who have been identified as gifted. The PEN class is described in detail under course descriptions.

Transfer Students

When a student transfers to Central Bucks, the counselor will evaluate the student's transcript to determine which course credits apply to the district's graduation requirements. Grades of the transfer courses will be listed according to the grading scale of the transferring school. **The district will weight grades from another school system only for courses that are also weighted-grade courses in Central Bucks or any Advanced Placement course.**

Advanced Placement Courses (AP Courses)

Students who take Advanced Placement courses should plan to take the appropriate AP examination. Please read the information about AP Tests in *Planning for College*.

Grades and Quality Points

Report Cards are posted four times each year and are available on the Parent/Student Portal. Letter grades are assigned the following quality points for computing grade point average:

A	= 4.0	B-	= 2.6	D+	= 1.4
A-	= 3.6	C+	= 2.4	D	= 1.0
B+	= 3.4	C	= 2.0	D-	= .6
B	= 3.0	C-	= 1.6	F	= 0

Honor Roll Criteria

Honor Roll: 3.0 Grade Point Average

High Honor Roll: 3.6 Grade Point Average

Distinguished Honor Roll: 4.0 Grade Point Average

Grading Scale

Letter Grade	Min. %	Letter Grade	Min. %	Letter Grade	Min. %
A	92.5	B-	79.5	D+	66.5
A-	89.5	C+	76.5	D	62.5
B+	86.5	C	72.5	D-	59.5
B	82.5	C-	69.5	F	0

Weighted Grades

Weighted grades are designed to encourage motivated students to select the most rigorous courses. Students may earn additional quality points in AP and Honors level courses.

The student who earns a grade of A in an AP course will receive 5 quality points instead of 4, a B grade earns 4 points instead of 3, a C earns 3 points instead of 2, and a D earns 2 points instead of 1. No credit will be given for a failing grade.

All honors courses in grades 9-12 are weighted by .25. The student who earns a grade of A in an Honors course will receive 4.25 quality points instead of 4, a B grade earns 3.25 quality points instead of 3, a C earns 2.25 instead of 2, and a D earns 1.25 quality points instead of 1. No credit will be given for a failing grade.

Student Recognition for Graduates

Only students who have been actively enrolled in an approved secondary school for the four years prior to graduation and have met the academic requirements established by Central Bucks School District will be eligible for consideration for valedictorian and salutatorian. Students receiving this honor will be notified by the principal on the morning of graduation. The valedictorian and salutatorian shall be recognized at the graduation ceremonies at their respective high schools.

It shall be the responsibility of each high school principal to select student speakers for the graduation ceremony through an audition process. Each high school shall establish a graduation speaker selection panel comprised of professional staff for the express purpose of selecting two student speakers for graduation. Prospective student speakers must submit written speeches and audition before the graduation speaker selection panel. The high school panels will develop a common rubric to be used for the selection of the speakers. Recommendation for speakers made by the panel shall be final.

On the last day of school, the principal and the Guidance Coordinator will review students for high academic performance according to the following system:

Cum Laude — 3.70 cumulative G.P.A.

Magna Cum Laude — 3.90 cumulative G.P.A.

Summa Cum Laude — 4.10 cumulative G.P.A.

A student earning a cumulative grade point average according to the above categories will receive a diploma seal indicating a graduating status of Cum Laude, Magna Cum Laude, or Summa Cum Laude. Cumulative grade point averages are calculated using weighted and non-weighted grades.

College Athletic Eligibility

Students planning to participate in Division 1 or 2 college athletics should be aware of NCAA academic requirements. High school course selection determines whether or not students will be able to play sports in those colleges. Students should contact their counselor or coach for specific details. **It is the student's responsibility to determine if his/her course work meets NCAA requirements. You may access NCAA approved courses online through the NCAA Eligibility Center Online at www.eligibilitycenter.org**

Foreign Exchange Programs

Details regarding credit and graduation requirements must be carefully arranged with your school counselor if foreign study is being considered.

Students cannot assume that credits will be obtained through foreign study. Because of the difficulty of earning enough credits for graduation through foreign study, it is recommended that students participate in a foreign exchange program **after** graduation from high school.

Early Completion of Graduation Requirements

Students who have completed all graduation requirements, **including completion of the High School Success Plan (Performance Assessment) credit**, by the end of the second marking period of their senior year may leave school with parent permission. These students will receive their diplomas with the rest of the senior class at commencement in June.

Careful planning with your school counselor is essential. Students must have their plans reviewed by their counselor and principal and students must request the early graduation option by May of their junior year. The plan should give reasons for early graduation and explain how the student's time will be used productively. Students requesting such approval must maintain full-time student status during their first semester. **Students are not permitted to leave at the end of the third marking period.**

Parent Portal

Parents and students can log into the Parent Portal feature of our Infinite Campus student system to see the current information regarding their students. Parents and students can view their schedule, email teachers, and view the current progress of their grades within a particular course-section based on the latest grades entered by their teacher for their assignments/test/projects.

Information about students' attendance records, immunizations, assessment scores from standardized tests, family address, and phone information is available through the portal. Parents and students can print out copies of the class schedule, unofficial transcript, and report cards. Students can access report cards from the previous year in their Portal, under "Campus Backpack" in the navigation pane. Graduating Seniors are encouraged to print out a copy of their final unofficial transcript and their final senior year report card immediately after graduation, as they will not have access to their portal after July 1 of the of their graduation year.






High school students can track their credits completed towards their high school graduation requirements through the Graduation Planner. Students in grades 9-11 can use the Infinite Campus Portal to login and select their requested courses for the upcoming school year between January-February of the current school year.



CENTRAL BUCKS

TECHNOLOGY & INNOVATION DEPARTMENT

GRADES 9-12 CB STUDENT TOOLBOX

Name of Account	Description	How to Access	Username	Password
STUDENT ACCOUNT "Network Login"	Provides access to district devices & systems.	Any district device.	Username: Last Name.First Initial (+) last 3 digits of ID. Example: Joe Smith = Smith.J123	Passwords are set in-district by students to meet CB password requirements.
1:1 LAPTOP 	Provides equitable access to technology in order to foster creative options to enhance learning.	Student 1:1 Laptop.	Email: username@student.cbsd.org Example: Smith.J123@student.cbsd.org	Password is same as Network Login.
OFFICE 365 LOGIN 	Access to Office 365 provides Email and OneDrive.	Go to: www.cbsd.org/365 using any device.	Email: username@student.cbsd.org Example: Smith.J123@student.cbsd.org	Password is same as Network Login.
CANVAS 	Students utilize Canvas to access resources, handouts, and assignments for courses.	Go to: www.cbsd.org/365 using any device.	Students login through their Office 365 Account (see above).	Students login through their Office 365 Account (see above).
STUDENT PORTAL 	Access grades, schedule, and calendar. Print schedules, unofficial transcripts.	Go to: www.cbsd.org and select the A+ icon. Select Campus Student. or Download the Campus Student App.	Email: username@student.cbsd.org Example: Smith.J123@student.cbsd.org	Password is same as Network Login.
NAVIANCE 	Web-based college / career search tool. Students will use for Success Plan and all college applications.	Go to: www.cbsd.org/365 using any device.	Students login through a link in their Office 365 Account.	Students login through a link in their Office 365 Account.

Connect with Central Bucks School District

facebook
<https://www.facebook.com/cbschools>

Instagram
<https://www.instagram.com/centralbuckssd/>
 Follow: centralbuckssd

CB 
<https://www.cbsd.org/mobileapp>

Twitter
<https://twitter.com/CBSDInfo>
 Follow on Twitter: @CBSDInfo

Vimeo
<https://vimeo.com/centralbuckstv>

Middle Bucks Institute of Technology (Grades 10-12)

Middle Bucks Institute of Technology offers a complete array of career, technical, and preprofessional courses to enhance the academic program of all students. The Middle Bucks Campus is located on York Road in Jamison, Warwick Township. The school is operated jointly by four participating school districts: Centennial, Central Bucks, Council Rock, and New Hope-Solebury. The school provides both a morning and afternoon program with students spending the other half of the day at their high school, where they continue to play an integral role, studying their required subjects and participating in co-curricular and interscholastic activities. Students entering 10th, 11th, or 12th grades are eligible to apply for admission. Transportation to Middle Bucks Institute of Technology is provided by the school district.

Students who attend MBIT will fulfill their physical education requirements for graduation in 9th grade year (.5 credit). Students who discontinue the MBIT program and return to their home school full time must complete the required PE credits for a Standard Diploma. Students will complete their Success Plan (Graduation Project) through their home schools.

Variety of Career Development Experiences

Depending on individual career plans and goals, students may enroll for one semester (18 weeks) or for one, two, or three-year experiences. Students whose career plans include college will find any of the career programs to be meaningful and appropriate enhancements to a college prep curriculum. Middle Bucks also offers many technical programs ideal for the employment-bound student.

All programs provide internship, clinical, or other work-based experiences in business and industry. Partnership agreements are in place for advanced credit in associate and/or baccalaureate programs at Bucks County Community College, Delaware Valley University, Gwynedd Mercy University, and Pennsylvania College of Technology, a Penn State affiliate.

Admission

Students must complete a Middle Bucks Institute of Technology application to be considered for admission. Selection is based on completion of selected prerequisites, aptitude and achievement scores, interest inventories, attendance records, behavior patterns, emotional readiness, and staff recommendations. Selected programs require prerequisites. Applications can be found online at www.mbit.org

Assessment

Assessment services are intended to help students make career decisions by identifying their technical aptitudes and interests and will be offered to students in each of the four sending districts. A testing center has been created at MBIT with staff trained in test administration and interpretation. For more information, or to have your child tested, please contact either your child's school counselor or MBIT's school counselor.

The Educational Program

The educational program at Middle Bucks Institute of Technology is organized into ten career clusters and twenty-two career pathways (i.e., major courses of study). Typically, students enroll in one career pathway as their major field of study and then complete a core set of courses common to the career cluster and a highly rigorous technical sequence of courses related to their career pathway. Students may complete additional specialized courses as they advance beyond standard secondary curriculum. The career cluster model is recognized as one of the most effective educational initiatives for preparing young people for the new economy.

For complete course descriptions and information please visit the MBIT website for the MBIT Program of Studies book at: <http://www.mbit.org/>

MBIT Career Clusters and Pathways

Architecture & Construction Career Cluster Pathways:

- Building Trades Occupations
- Computerized Drafting & Engineering Graphics
- Electrical Technology
- Horticulture, Landscape & Design
- HVAC & Plumbing Technology
- Residential Construction Carpentry

Arts, A/V Technology & Communications Career Cluster Pathways:

- Commercial Art & Advertising Design
- Multimedia Technology

Health Science Career Cluster Pathways:

- Dental Occupations
- Medical and Health Professions
- Sports Therapy & Exercise Management

Hospitality & Tourism Career Cluster Pathway:

- Culinary Arts & Science

Human Services Career Cluster Pathways:

- Cosmetology
- Early Childhood Care & Education

Information Technology Career Cluster Pathways:

- Networking & Operating Systems Security
- Web Design & Interactive Media

Law, Public Safety & Security Career Cluster Pathway:

- Public Safety

Manufacturing Career Cluster Pathway:

- Welding Technology

Science, Technology, Engineering, & Mathematics Career Cluster Pathways:

- Engineering Related Technology

Transportation, Distribution, & Logistics Career Cluster Pathways:

- Automotive Technology
- Collision Repair Technology

Planning for College

Please refer to your building's Guidance website for detailed information about the college admission process.

Students often want to know how they can improve their chances of being accepted to the college of their choice and how they can prepare for college work. Although there is no guarantee that a student will be accepted by a particular college, the next few pages offer proven ways to find colleges which are the best fit for you, along with sound advice on how to give yourself the best possible preparation for the rigors of college work.

Go for the Challenge

Selecting appropriate courses and a challenging academic program is the first step in planning for college. Consult the Recommended Course Sequences charts for appropriate English, Math, Science, Social Studies and World Language courses, and read the section on course selection under General Information. Plan as rigorous a program as you can within your abilities.

Naviance

Naviance is a tool that is very helpful in post-secondary planning. This tool enables students to access college and career information, build a resume, complete on-line surveys, and register for college visits. Each student will be issued registration information for Naviance for a personal Naviance account.

PSAT

Students should plan to take the PSAT as sophomores and juniors. The PSAT will give you valuable experience in preparing for the more important SAT exam. Sophomores who have taken or are taking Geometry are encouraged to take the PSAT for practice. **Scores on the PSAT taken by juniors are used to determine National Merit Scholarship semifinalists and commended students for the following school year. For this reason, students should be sure to take the test in their junior year even if they have taken a practice test as sophomores.**

SAT

Colleges consider your scores on the SAT. Colleges may also look at results of SAT Subject Tests and Advanced Placement Tests, where applicable. More selective colleges may require students to take one or more SAT Subject Tests. These tests may also be used for placement in college courses. Please make sure that you have your scores sent to your high school. Visit www.collegeboard.org for online registration, test preparation, and further information.

PRE-ACT

Pre-ACT simulates the ACT testing experience within a shorter test window on all four ACT test subjects: English, math, reading and science. Results predict future success on the ACT test and provide both current achievement and projected future ACT test scores on the familiar 1-36 ACT score scale.

ACT

Some students may choose to take the ACT. All colleges accept ACT scores for consideration in addition to (or in place of) both SAT and SAT Subject Tests. Visit www.actstudent.org for online registration test preparation, and further information.

ePrep

Central Bucks students in grades 10 through 12 are automatically enrolled at <https://www.eprep.com>, and have FREE access to SAT and ACT prep programs. At eprep.com, students will find practice tests, test-taking tips, and videos that explain how to correct problems answered incorrectly during practice sessions. CBSD students receive a welcome email with login information during their sophomore year.

Testing Information for PSAT/SAT/PREACT/ACT/AP

	PSAT	SAT	PRE-ACT	ACT	AP
Site	All 3 High Schools	CB East & CB South	All 3 High Schools	CB South	All 3 high schools
Site Code	None needed	East 39-162 South 39-718	None Needed	South 218270	None needed
Dates	October only	Multiple times every year	Spring one-time only	Oct., Feb. & April	First 2 weeks of May
Suggested Grade	10 th & 11 th	11 th & 12 th	10 th only	11 th & 12 th	10 th , 11 th & 12 th

CEEB Code

East 390488

West 391045

South 394992

CEEB codes must be entered whenever a student registers for the SAT or ACT so the student's scores will be reported to their high school.

Test Preparation is Key

Students should not take the PSAT, SAT, PRE-ACT, or ACT without careful preparation. It is strongly recommended that students complete Algebra 1, Geometry/Trig, and Algebra 2/Trigonometry before taking the SAT or ACT, as these skills are required for the math portion of the test. Central Bucks offers several opportunities for (free) test preparation: Students may request one or both of our [test prep courses](#): SAT/ACT Test Preparation—English and SAT/ACT Test Preparation—Math.

Advanced Placement (AP) Courses and Tests

Students who take Advanced Placement courses should plan to take the appropriate Advanced Placement Exam. (Exams are given at all three high schools.) AP test scores are not placed on the high school transcript. However, good AP scores will reflect well on your academic abilities when colleges consider your high school program.

Colleges may award college credit or allow you to skip the beginning level of a course sequence. Students should check colleges' websites to determine each college's policy on AP credits.

Class Rank and GPA

Class rank is not reported to colleges for admission purposes, but the district does report the student's cumulative grade-point average (GPA). The weighted GPA is based on grades from all classes taken in grades 9–12. **Concern for grade-point average should not keep students from selecting a challenging program and should not be used as an excuse for dropping a course in order to take one that seems easier.** Colleges are more interested in the academic rigor of a student's program than they are in the student's GPA.

Plan a Well-Rounded Program

College admission officers also look at the degree to which a student has contributed to the life of the school or community.

If you are planning to apply to highly selective schools, it's essential to have something that will set you apart from the thousands of other applicants who also have similar grades and standardized scores. Other factors, such as an interview, essay, meaningful activities, and leadership may be considered in the admissions process.

Gather Information

Visit college websites for applications and information, including financial aid and early-decision requests. Find out all you can about colleges and the application process. School counselors are your best source of information about college selections, admissions procedures, and testing schedules. Students should talk to counselors regularly and keep them informed of plans. Students and parents should plan to attend college information programs provided by the Guidance Departments, along with the district College Fair and District Financial Aid Night.

College Visits to High Schools

Each fall, college admission representatives visit each high school for informal information sessions with students. Juniors and Seniors are encouraged to attend these visits, as the visiting college rep is typically the person who will be reviewing the student's application to that school. Students should sign up for these visits through Naviance. Additional information is available in the Guidance Office and on each high school's website.

Visiting College Campuses

It is also important to visit the colleges that interest you, so you can schedule interviews with admissions counselors and get a real idea of what the school and campus are like. Students should attend college interviews on time, appropriately dressed, and prepared with thoughtful questions. Be sure to send a letter of thanks after the interview.

College Application Process

Please refer to your high school's Guidance Website for detailed, step-by-step instructions regarding the College Application process. For each college, students must complete an application, send official transcripts, send test scores and letters of recommendation (if applicable), and pay the application fee.

Complete the Application

Be sure to give yourself plenty of time to fill out applications. Know all your deadlines – **students are ultimately responsible for meeting all their college admission deadlines.** Some colleges use their own electronic application (found on their website), and many use the Common Application (www.commonapp.org) or Coalition App (www.mycoalition.org), which can be filled out once and sent to many participating colleges. Many applications require at least one essay, and some schools require several essays.

Send Transcripts

Official transcripts must come from the Guidance Department, not from the student. **Please note** that transcripts will contain grades for all courses taken in grades 9-12. The student's GPA is based on grades in courses taken in grades 9-12. Students and parents must sign a Records Release Form, and then students can use Naviance to submit electronic requests to send their transcripts to colleges.

It takes time for office staff to prepare your transcripts, especially when hundreds of students are applying to college at the same time. **Please allow at least fifteen SCHOOL days for your transcript request to be processed.**

Send Test Scores

Many colleges require that you send "Official Test Scores," which means that you must have your scores sent to your colleges directly from the testing agency (College Board for SAT's; ACTStudent.org for ACT's). Students must send their scores directly from the testing agency to colleges as part of the application. Students should check the college's policy on whether standardized tests are a required part of the application. *Note that when registering for SAT's or ACT's, you may list up to four colleges to which you'd like your Official Scores sent – for free. Take advantage of this opportunity to send scores for free to colleges. Otherwise, you'll need to pay a fee for each school to which you send scores.

Letters of Recommendation

Many colleges require one or more letters of recommendation from teachers, and often one from a School Counselor. Follow your high school's procedure for requesting letters. Requests may be made electronically through Naviance; however, you must first meet with the teacher and request the letter in person. There are also certain requirements for obtaining a school counselor letter of recommendation – please see your high school's Guidance Website for details. **Don't ask teachers, counselors, or community members to write recommendations for you at the last minute**—it's not fair to them, and a hastily written recommendation will not help your application.

Financial Aid

Choose the best college you and your family can afford. For many students this means exploring all options for financial aid. Financial aid packages include grants, which are based on student need; scholarships, which are awarded on the basis of ability alone or ability combined with need; work-study programs; and low-interest student loans, which must be repaid after graduation. Contact the financial aid office of any college to which you are applying for specific policies.

Students seeking financial aid need to complete the Free Application for Federal Student Aid (FAFSA) online at www.fafsa.gov. Seniors can access the FAFSA in the fall, starting October 1st, and should submit their completed application as soon as possible. Some colleges may *also* require applicants to fill out the CSS Profile at <https://cssprofile.collegeboard.org>. More information about Financial Aid is available through your high school's Guidance Website; through our District Financial Aid Night held every fall, and through FAFSA Information Workshops often held at various high schools.

Scholarship Information

Scholarship announcements and college information are provided throughout the year through the Guidance Department. Students should check Naviance for a list of scholarships.

NINTH GRADE COURSES

ART

[8250 Exploring Drawing and Painting](#)

(.25 credit)

This course is designed for all students who enjoy two-dimensional work. Emphasis is placed on developing basic drawing and painting skills and techniques, while being introduced to a variety of two-dimensional media through creative exploration. Possible media include(s) drawing pencils, pastels, charcoal, crayon, markers, ink, and various paint materials. The fundamentals of composition as found in the elements and principles of design will be used when drawing and painting from life and imagination, using realistic and abstract themes. Art history, art criticism, and aesthetics will be integrated into all units of study. This course is not required to take Drawing and Painting 1 or 2, nor does it replace Drawing and Painting 1 as a prerequisite for Drawing and Painting 2. This course has no fee for materials.

[8954 Three-Dimensional Design](#)

(.25 credit)

The course focuses on the creation of Three-Dimensional art from three different perspectives. The points of view of a sculptor, craftsman and an industrial designer will be explored. Students will learn basic hand-building techniques used to create ceramic works of art. Students will explore a variety of Three-Dimensional materials, such as: metalsmithing, paper-mache, wood, found object, plastics, animation, fibers, mosaics, glass and wire. Students will learn a variety of decorative and finishing techniques. This course is not a prerequisite and has no fee.

[8366 Exploring Ceramics](#)

(.25 credit)

This is a beginning level course based in exploration and creativity that emphasizes the application of two- and three-dimensional design principles in the media of ceramics. Students will focus on hand-built methods of ceramic production, while producing a wide variety of functional and decorative pieces. Students will also explore the significance of clay to human development through their

study of Art History, Art Criticism, and Aesthetics. A variety of topics and experiences will provide students with a foundation for further in-depth course work in ceramics.

This course is not required in order to take Ceramics 1, nor does it replace Ceramics 1 as the prerequisite for Ceramics 2. This course has no fee for materials.

[8460 Exploring Photography](#)

Lenape Only

(.25 credit)

Students will study the basic principles of exposing, developing, and printing 35mm black and white film, in addition to various alternative photographic methods and techniques. Students will explore some of the photographic possibilities using a SLR 35mm film camera with manual controls. Care and use of a camera and darkroom equipment and film development materials will be emphasized. Students will participate in discussion about the fundamentals of good photography and the guidelines of composition. Cultural influences on the artist/photographer and historical development of the media will be studied. and its parallels to film photography.

There will be a materials fee of \$45.00 that will supply each student with one box of photographic papers and limited film rolls.

Each student MUST have use of a 35-mm camera with MANUALLY ADJUSTABLE controls for focus, aperture, and shutter speed.

ENGLISH

English 9 is a required course for high school graduation. There are no substitutes for this core course.

[0900 Honors English 9](#)

(1 credit)

The Honors English 9 course integrates reading, writing, researching, speaking, and thinking skills at an accelerated pace. Avid readers will read and analyze more complex texts in this course to seek and gain a deeper understanding of the craft of literature by examining author's purpose and craft as well as the use of various literary devices across literary genres. Students will analyze text for evidence of specific literary elements, namely theme, point of view, and indirect characterization. Students seeking to advance the impact of their writing will develop literary analysis skills, build effective arguments, and experiment more deeply with sophisticated narrative writing techniques. A core of classic literature is balanced with contemporary and culturally diverse fiction and nonfiction selections in order to better understand how social, historical, political, cultural, and/or geographical contexts influence writing. Students in this course will seek and encounter challenging texts, discussions, and writing requirements that require deeper research and analytical skills. **Prerequisite: Advanced English 8, A or B or teacher recommendation; Academic English 8, A or A- or teacher recommendation. Honors weighted-grade course for 0900.**

0920 Academic English 9

(1 credit)

The English 9 course integrates reading, writing, researching, speaking, and thinking skills. Students will gain an understanding of the craft of literature by examining author's purpose and craft as well as the use of various literary devices across literary genres. Students will analyze text for evidence of specific literary elements, namely theme, point of view, and indirect characterization. Students will also begin introductory literary analysis and experiment more deeply with narrative writing techniques. A core of classic literature is balanced with contemporary and culturally diverse fiction and nonfiction selections in order to better understand how social, historical, political, cultural, and/or geographical contexts influence writing.

0970, 0980, 0990 English 9

(1 credit)

These courses are designed for students with special needs.

FAMILY AND CONSUMER SCIENCES

6953 Sewing

(.25 credit)

In this course students will learn skills that will help them create new and useful items from fabric. Students will use creativity and problem-solving skills to create 3-dimensional projects from 2-dimensional patterns utilizing STEAM (science, technology, engineering, art and math) skills. Machine sewing experience, pattern reading, and measuring will be emphasized. This is a hands-on-project-based course during which students will construct at least one article of clothing, and complete a second student-selected project either up-cycling or another sewing project.

6954 Cooking for Life

(.25 credit)

This course focuses on how to plan and eat in order to stay vibrant and healthy. The course includes the latest trends in nutrition and consumerism. Students will participate in challenging cooking lab experiences that include a variety of recipes to fit today's lifestyles. A culminating project is required.

HEALTH AND PHYSICAL EDUCATION

7950 Physical Education/Health 9

(.5 credit)

This required course is designed to teach students the skills, knowledge, and attitudes essential to live a healthy lifestyle. In this course, students will explore the many dimensions of wellness through both physical activity and classroom experiences. Students completing this course will participate in a variety of activities in physical education such as: lifetime activities, team sports, cooperative activities, team building, and personal fitness. Emphasis will be placed on fitness, its components, and their relationship to activity. Health education provides students with the knowledge and skills necessary to confront health related issues to make a smooth transition into adolescence. Social and emotional wellness, stress

management, healthy relationships, substance abuse, personal fitness, HIV/AIDS, and human growth and development will all be part of the ninth-grade experience. Health-related fitness is a goal for all students. Knowledge, teamwork, cooperation, decision-making skills, sportsmanship, and leadership skills are emphasized as objectives for success. Areas of study include: Team and Lifetime Sports, Cooperation Activities, HIV/AIDS, Substance Abuse, Growth and Development (Human Sexuality), Nutrition, Physical Fitness, and Healthy Relationships.

INTEGRATED TECHNOLOGY

5639 Technology & Application Development

This course introduces 9th grade students to the fundamentals of mobile application (app) design and development utilizing coding and app development programs. Students will progress through the stages of app development, starting with the design process and culminating with the completion and marketing of their app. The goal of this course is to incorporate additional technology and problem-solving competencies from the Integrated Technology II course and introduce students to relevant and modern technologies of App development, innovative creation of AR/VR products, as well as Digital Marketing concepts. This project-based course will utilize Central Bucks Technology Standards, which builds upon the K-8 technology toolkit. This course will be the 9th grade elective course. Students will have the opportunity to work with the building and community to create projects relevant to the assessed needs. Students will receive instruction to meet technology proficiencies, independently apply skills, and illustrate understanding through project-based application.

MATHEMATICS

Because of the sequential development of the mathematics curriculum, students must attain the prerequisites in the previous course before advancing to a more difficult level. The prerequisite for each course has been developed with the sole purpose of ensuring students have the skills they need to be successful. These prerequisites must be met before entering the course. Students who do not meet the requirement can elect to attend summer school to reach the prerequisite or retake the course during the next school year.

2900 Honors Algebra 2/Trigonometry

(1 credit)

This is an honors course designed for students with outstanding mathematical ability and interest who have mastered the concepts and skills of Algebra 1 and Geometry/Trig. Honors mathematics courses require students to move at a faster pace than the equivalent standard level course and they are different from the equivalent standard level course in both the quality of the work expected and the quantity of the work required inside and outside of the classroom. Students taking Algebra 2/Trig in ninth grade are accelerated by 2 years in their study of mathematics. Students will simplify a variety of expressions (radical, exponential, quadratic, polynomial, rational). Students will solve linear, quadratic, and polynomial

equations and will graph and analyze linear, quadratic, and polynomial functions. Other topics will include series, sequences, and trigonometry of the right triangle. This course is awarded a .25 weight as a recognition of the fact that it is more demanding and has more requirements that go beyond those of the standard mathematics course. **Prerequisite: (2800) Geometry/Trig, B- (80%) or better or teacher recommendation. Honors weighted grade.**

[2901 Geometry/Trigonometry](#)

(1 credit)

This course is designed for students with outstanding mathematical ability. Students taking Geometry/Trig in 9th grade are accelerated 1 year in their study of mathematics. Geometry/Trig is a modern development of Euclidean Geometry covering congruency, similarity, parallelism, perpendicularity, areas, and volumes. Concepts from coordinate geometry are reviewed with an emphasis on the integration of algebra and geometry. Trigonometry topics include indirect measurement, and theories/applications relating to tangents, apothems, and inscribed polygons. **Prerequisite: (2810) Algebra 1 or (2811) Algebra 1B, C- (70%) or better or teacher recommendation**

[2915 Algebra 1](#)

(1 credit)

This course is intended for college bound students who have successfully completed prealgebra and have demonstrated excellent mathematical ability. Algebra 1 extends previously learned arithmetic skills to expressions involving variables. Major topics include linear equations and inequalities in one and two variables, exponents and polynomials, factoring, quadratic equations, proportions, functions, radicals, rational expressions, and data analysis. Problem solving, application, communication and reasoning are emphasized throughout the course. Students in this class will take the Algebra 1 Keystone Exams. **Prerequisite: (2820) Pre-Algebra, A- (90%) or better or teacher recommendation.**

[2916 Algebra 1 B](#)

(1 credit)

Algebra 1B builds on the concepts studied in Algebra 1A. This is the second course in an in-depth two-year study of formal Algebra. The fundamental operations and their properties are studied. Topics include: linear functions and inequalities, systems of equations, exponents and polynomials, factoring polynomials, rational expressions, radicals and quadratic functions. Problem solving, application, communication and reasoning are emphasized throughout the course. Students in this class will take the Algebra 1 Keystone Exam. **Criteria for placement: (2815) Algebra 1A, grade of C- (70%) or better or teacher recommendation.**

[2920 Algebra 1A](#)

(1 credit)

This course is intended for college bound students who have successfully completed prealgebra and who have demonstrated an understanding of all concepts of the course. It extends previously learned arithmetic skills to expressions involving variables. This course is a formal study of Algebra 1 concepts including integers, rational numbers, expressions, solving linear equations, graphing linear functions, writing linear equations, and exponents.

[2970, 2980, 2990 Mathematics 9](#)

(1 credit)

These courses are designed for students with special needs.

MUSIC

Students may elect to take a music performance class (Band, Chorus or Orchestra) in ninth grade. Please note: Students must be enrolled in one of these curricular music performance classes to be eligible to audition for the BCMEA County Music Festival or any of the select (after-school) music ensembles. Students may also elect Guitar Class, as a .25 credit course.

[8969 Guitar 9](#)

(.25 credit)

This is a course designed for students who would like to learn to play guitar. Beginner to advanced students are welcome. The course will focus on a practical foundation in guitar technique. Students will learn how to play chords and melodies on the guitar in various styles using chord symbols and tablature. Additionally, students will have an opportunity to learn how to perform pop songs from various genres. Students will also learn about the structure of chord progressions and how they can be applied to songwriting. Guitars will be provided during class.

[8965 Band 9](#)

(.5 credit)

This course is designed for ninth graders who play band instruments in the woodwind, brass, and percussion families. The goal of this full-year program is to further develop musical skills by providing a wide range of musical experiences. Students will learn the techniques needed to achieve higher levels of music performance. Both concert and marching opportunities are scheduled.

[8967 Chorus 9](#)

(.5 credit)

This course is designed for ninth graders who enjoy singing and choose to enroll in a full-year program. Emphasis is placed on developing comprehensive musicianship through the use of choral literature representing a variety of styles, forms, and cultures, including both sacred and secular texts. The goal is for students to perform artistically at their ability level while developing skills in vocal technique, sight-reading, basic music theory, and music history literature.

[8966 Orchestra 9](#)

(.5 credit)

This course is designed for ninth graders who have a minimum of two years of study of violin, viola, cello, or string bass. This requirement may be waived pending an audition. The goal of this full-year program is to further develop musical skills while providing a variety of musical experiences. Students will learn the techniques needed to achieve higher levels of performance.

PEN (Gifted Program)

[9901 PEN Seminar 9](#)

(.25 credit)

This course provides students identified as gifted with the opportunity to approach texts, ideas, and the world philosophically, critically, and analytically. Class readings are given meaning through interpretive and expressive writing, discussion, and the use of emerging technologies. Intellectually inquisitive students will explore language and thought through an interdisciplinary approach to learning within the format of a seminar.

At the beginning of the course, students may choose between taking PEN for a letter grade or as a pass/fail course. In either case, credit will be awarded if the course is passed.

READING

[4940 Reading 9](#)

(1 credit)

This course is designed for students who have not mastered basic reading, writing, and study skills. Students will be involved in all aspects of communication: reading, literary analysis, writing, speaking, listening, language, and study and research skills. The course will combine whole group instruction with self-selected topics for reading and writing. Computers will be an important resource for developing writing and higher-level thinking skills. This course offers elective credit toward graduation.

[4970, 4980, 4990 Reading 9](#)

(1 credit)

These courses are designed for students with special needs.

SCIENCE

[3900 Honors Science 9](#)

(1 credit)

Honors Science 9 explores the complex and dynamic set of interconnected systems that interact over a wide range of temporal and spatial scales on Earth. Students will undergo a journey through the geosphere, hydrosphere, atmosphere, and biosphere allowing them to discover how these systems have and continue to change over time. Honors Science 9 students will actively engage in the scientific practices through labs, simulations, scientific readings, and problem-based activities. They will examine a variety of nonfiction texts and complete an extended research project. Honors Science 9 is intended for students who have distinguished themselves in mathematics and science and are interested in the most rigorous science sequence. **Prerequisites: (3800) Advanced Science 8, A- or better or teacher recommendation or (3820) Academic Science 8, A or better or teacher recommendation. Honors weighted grade.**

[3920 Academic Science 9](#)

(1 credit)

Academic Science 9 explores the complex and dynamic set of interconnected systems that interact over a wide range of temporal and

spatial scales on Earth. Students will undergo a journey through the geosphere, hydrosphere, atmosphere, and biosphere allowing them to discover how these systems have and continue to change over time. Academic Science 9 students will actively engage in the scientific practices through labs, simulations, scientific readings, and problem-based activities. This course is intended for students wishing to meet college entrance requirements.

[3970, 3980, 3990 Science 9](#)

(1 credit)

These courses are designed for students with special needs.

SOCIAL STUDIES

United States History is a required course for high school graduation. There are no substitutes for this core course.

[1900 Honors United States History](#)

(1 credit)

United States History will cover the content of American history between 1890 and the present. Topics will follow those in Academic United States History.

This course is designed for students who have demonstrated proficiency in social studies content and skills as well as language arts skills. Students will be expected to complete significantly more reading, informative and persuasive writing, and research projects than in the standard course. Some of the educational materials will be on a higher level than those used in the standard course and the course moves at a faster pace than the academic. **Prerequisite: Advanced Social Studies 8 and Advanced English 8, A or B or teacher recommendation; Academic Social Studies 8 and Academic English, A or A- or teacher recommendation. Honors weighted grade.**

[1920 Academic United States History](#)

(1 credit)

United States History continues work begun in Grade 8 and includes the history of the United States from 1890 to the present. Units include Industrialization, America as a World Power, Great Depression and New Deal, World War II and the Cold War, The Civil Rights Movement, and Contemporary America.

[1970, 1980, 1990 United States History](#)

(1 credit)

These courses are designed for students with special needs.

TECHNOLOGY AND ENGINEERING EDUCATION

[6949 Engineering and Design](#)

(.25 credit)

This course focuses on the process of bringing a design concept to reality. Through actual construction and testing of prototypes, students gain an understanding of the entire design cycle. Students evaluate their designs through experimentation. Students design and create projects within the five areas of technology. Projects vary and may include CO2 cars, rockets, gliders, mousetraps and battery powered vehicles, bridges, robotic arms, skateboards, and other

structures. Students have the opportunity to work on their own projects and focus designs that interest them.

[6950 Technical Drawing and Design](#)

(.25 credit)

This course allows students to explore basic engineering drawing techniques, computer-aided drafting, product design and development, architectural design, exploration of graphic software and solid modeling. Students interested in engineering, architecture, computer illustration, design, construction, and technology should find this course of value. Students will work on an individual basis as they utilize freehand, mechanical, and computer-aided methods of illustration.

[6957 Communications Technology](#)

Tamanend only

(.25 credit)

This course gives students hands on experience with current communications trends and devices. Students will apply communications principles while producing effective messages. Students will create projects using video production equipment and digital cameras. Various types of photo editing software will be utilized to produce the final project. Students in Communications Technology will also be involved in the daily production of the school's morning show. Students will also examine the historical impact of communication technologies on society and examine future trends and career opportunities.

[6958 Engineering Processes](#)

Not offered at Tamanend

(.25 credit)

This course is designed as a "hands on" course that teaches the basics of materials processing and production. From developing an idea to following a plan, students learn to safely use tools and power equipment to process materials to form finished products.

WORLD LANGUAGES

[4501 Spanish 1](#)

(1 credit)

The goal of first-year language is to enable students to use fundamental expressions and vocabulary in verbal and written context while integrating cultural elements. This course emphasizes communicative skills, relevant grammar concepts, reading and listening comprehension and cultural concepts. The target language will be the language of the classroom. Online resources, and a variety of supplementary materials are used to help achieve this goal. The department recommends a grade of C or better in the previous year's English course.

[4202 French 2](#)

[4502 Spanish 2](#)

(1 credit)

Level 2 continues language study in the same patterns as Level 1. Students experience opportunities for more advanced verbal and written self-expression and related cultural elements. This course emphasizes communicative skills, more advanced grammar concepts, reading and listening comprehension and cultural concepts.

The target language will be the language of the classroom. Online resources, and supplementary materials are essential elements of these courses. **Prerequisite: Level 1, grade C- or better.**

HIGH SCHOOL COURSES

ART

All courses in Art are only offered if there is sufficient enrollment.

[8551 Art 1 – Introduction to Studio Art](#)

(18 weeks, 1 credit)

This course is open to all students in grades 10-12 who are interested in beginning an exploratory study of art. Knowledge, skills, and techniques learned in grades K-9 serve as a starting point and foundation for students to develop and refine their ability to control various two- and three-dimensional media. Students will have introductory and developmental experiences in drawing, acrylic painting, printmaking, and sculpture. Students will also be involved in an active study of Art History, with a focus on American Art. Processes and skills associated with Art Criticism, Aesthetics, and Philosophy will also be explored.

[8552 Art 2 – Intermediate Studio Art](#)

(18 weeks, 1 credit)

Students who elect to take this course will explore a variety of media and techniques used to create artworks. The development of specific skills that emphasize the direct observation of objects in order to develop control over values, form, proportions, perspective and color within artworks will be emphasized. Students will learn how to create strong compositions in a variety of 2- and 3-dimensional media. In addition, students will be involved in a study of Art History, Aesthetics, and Art Criticism.

Students who elect this course will expand on the skills and concepts introduced in Art One. Emphasis will be placed on building on experiences with design principles while becoming more adept through a broad exposure to various media. Students are given more in depth problems to solve utilizing creatively and innovative connections, which will help them to build their own style and creativity while becoming more adept through a broad exposure to various media. **Art 2 is the prerequisite for AP Art and Design.** **Prerequisite: Art 1 or Drawing and Painting 2, C or better.**

[8553 Art 3 – Comprehensive Studio Art](#)

(18 weeks, 1 credit)

In this course, there will be further development and refinement of skills and knowledge in life drawing, landscape drawing, watercolor and acrylic painting, additive and subtractive sculpture, and advanced printmaking processes (e.g., serigraphy, etching, lithography), three-dimensional design, along with art-related careers, Art History, Criticism, and Philosophy. Students considering post-high school study and/or work in any related art field are encouraged to take this course. **Prerequisite: Art 2, C or better.**

[8500 Advanced Placement Art and Design](#)

(18 weeks, 1 credit) *Fall Only course

The AP Art and Design course is designed for students who are seriously interested in the practical experience of art and wish to develop mastery in the concept, composition, and execution of their ideas. AP Art and Design is not based on a written exam; instead, students submit portfolios of 24 pieces of art for evaluation at the end of the school year. In building the portfolio, students experience a variety of concepts, techniques and approaches designed to help them demonstrate their abilities as well as their versatility with techniques, problem solving, and ideation.

Students will develop a body of work that culminates in a portfolio. The portfolio requirements are divided up into two segments: The Sustained Investigation section of the portfolio includes 15 digital images of works of art that demonstrates process, experimentation and revision; while investigating an idea or theme that has personal interest to the student. The Quality section of the portfolio is comprised of five artworks that demonstrate a clear understanding of concept, composition and execution, whether they are simple or complex. ***Prerequisite: Art 2 (Intermediate Studio Art) grade B or better. *Spring semester: Highly recommended that students take Art 4 (Personal Directions in Studio Art Portfolio) additionally in the spring semester to finalize portfolio submission.**

[8554 Art 4 – Personal Directions in Studio Art and Portfolio](#)

(18 weeks, 1 credit)

This course is intended for students seeking to develop a more sophisticated and personalized style for their artwork or for those who wish to prepare portfolios for college, employment interviews, or the College Board AP Art and Design course. Emphasis will be placed on developing creative solutions and expression in choice of media. Art History, Criticism, and Philosophy will be integrated into all units. **Prerequisite: Art 3, C or better or AP Art and Design. Recommended to take this course in the spring after completing the fall course of AP Art and Design.**

[8360 Introduction to Ceramics](#)

(9 weeks, .5 credit)

This is a beginning level course, open to all students in grades 10-12, that emphasizes the application of design principles in ceramic media. Students will focus on hand-building methods of ceramic production, while producing a wide variety of functional and decorative pieces. This course will provide students with a foundation for further in-depth course work in ceramics. This course is not required in order to take Ceramics 1, nor does it replace Ceramics 1 as the prerequisite for Ceramics 2. **A fee of \$10.50 through My Payments Plus will be charged for instructional materials used in projects kept by the student.**

[8361 Ceramics 1](#)

(18 weeks, 1 credit)

This course is open to all students in grades 10-12 who would like to explore clay as a medium for artistic expression. Students will focus on hand-building and sculptural techniques, while producing a variety of functional and decorative pieces. This course may also include a brief introduction to the potter's wheel. Glazing and surface decoration will be introduced. **A fee of \$21.00 through My**

Payments Plus will be charged for instructional materials used in projects kept by the student.

[8362 Ceramics 2](#)

(18 weeks, 1 credit)

Students will continue their study of ceramic media utilizing advanced combinations of hand-building, wheel throwing, and decorative techniques. Students will plan and execute advanced works of art with the instructor. Technique is integrated with student ideas, aesthetics and personal expression. **A fee of \$21.00 through My Payments Plus will be charged for instructional materials used in projects kept by the student. Prerequisite: Ceramics 1, C or better.**

[8363 Ceramics 3](#)

(18 weeks, 1 credit)

Students will continue their study of ceramic media and design problems. Individuals will plan and analyze units of study with the instructor in order to develop skills in specific areas and knowledge. Technique is integrated with student ideas, aesthetics and personal expression. **A fee of \$21.00 through My Payments Plus will be charged for instructional materials used in projects kept by the student. Prerequisite: Ceramics 2, C or better.**

[8251 Drawing and Painting 1](#)

(9 weeks, .5 credit)

This course is open to all students who enjoy two-dimensional work. Emphasis is placed on developing basic drawing and painting skills and techniques. A variety of media will be used including drawing pencils, pastels, charcoal, watercolors, and opaque media. The fundamentals of composition as found in the elements and principles of design will be used when drawing and painting from life and imagination, using realistic and abstract themes.

[8252 Drawing and Painting 2](#)

(9 weeks, .5 credit)

This course is open to students in grades 10-12 who want to advance their skills and techniques in various drawing and painting topics and media. Students may work with advanced media such as conte, pen and ink, graphite stick, colored pencil, watercolors, acrylics, and mixed media while being encouraged to develop their own expression and style. This course is of special interest to students who want more time for portfolio presentation work. This course will focus on conceptual development and use of elements of design for creative expression. **Prerequisite: Drawing and Painting 1 or Art 1, C or better.**

[8461 Photography 1](#)

(9 weeks, .5 credit)

Students will study the basic principles of photography through both film and digital techniques. Throughout this course of study will be an introduction to digital editing techniques and their parallels to film photography. Use of cameras and darkroom equipment and the fundamentals of good photography will be emphasized. Cultural influences on the artist/photographer and historical development of the media will be studied.

Students will purchase their own film, photographic papers, and various other photographic supplies at an approximate cost of \$45. Each student must have use of a 35-mm SLR film camera with manually adjustable controls for focus, aperture, and shutter speed. Students are also encouraged to bring a digital camera or phone capable of taking digital photos.

8462 Photography 2

(9 weeks, .5 credit)

This course offers a continued study of specific black and white film skills with expanding technology in night/low light photography, and studio lighting. Photography 2 is designed to allow students to refine and master basic photographic techniques, allows additional darkroom time, and improvement of digital photography skills.

Students will purchase their own film, photographic papers, and various other photographic supplies at an approximate cost of \$45. **Each student MUST have use of a 35-mm SLR film camera with MANUALLY ADJUSTABLE controls for focus, aperture, and shutter speed. Devices for capturing digital photos are strongly encouraged, but not a requirement. Prerequisite: Photography 1, C or better.**

8463 Photography 3

(9 weeks, .5 credit)

Photography 3 encourages experimentation with advanced techniques using the camera and darkroom. Further study of the artist/photographer's role in society, career exploration, and portfolio development will be pursued. Digital photography and Adobe Photoshop will be explored. Previous analog techniques and digital tools will be joined to synthesize modern photography skills. Students will purchase their own film, photographic papers, and various other photographic supplies at an approximate cost of \$45. **Each student MUST have use of a 35-mm SLR film camera with MANUALLY ADJUSTABLE controls for focus, aperture, and shutter speed. Devices for capturing digital photos are strongly encouraged but not a requirement. Prerequisite: Photography 2, C or better.**

8464 Photography 4

(9 weeks, .5 credit)

This course is open to students who wish to refine advanced skills using photographic equipment. Students will have maximum use of the darkroom and Photoshop to develop their own portfolio through different darkroom and digital processes. This course concentrates on the use of photography as a fine art medium. Students will demonstrate mastery of photographing and printing techniques and investigate various photographic careers.

Students will purchase their own film, photographic papers, and various other photographic supplies at an approximate cost of \$45. **Each student must have use of a 35-mm SLR film camera with manually adjustable controls for focus, aperture, and shutter speed. Devices for capturing digital photos are strongly encouraged, but not a requirement. Prerequisite: Photography 3, grade C or better.**

8562 Computer Graphics: Illustration and Graphic Design

(9 weeks, .5 credit)

This course is intended to introduce the student to the use of the computer as a drawing and two-dimensional design tool. Students will learn how to manipulate vector drawing tools and options in the industry standard Adobe Illustrator software while working with specific design and illustration problems. Assignments will focus on the development of computer graphics skills necessary for success in the fields of advertising, animation, graphic design, illustration, app creation, video game design and industrial design. Students taking this course should have basic skills in freehand drawing. Students will explore ways the computer can serve as a vehicle for artistic expression and graphic design. Assignments will focus on the development of computer vector graphics skills through a series of specific visual design problems. **No Prerequisite.**

8564 Digital Imaging

(9 weeks, .5 credit)

This course is designed to introduce the student to the use of the computer as a tool in the manipulation of photographic images. The student will learn how to create digital images using the industry standard Adobe Photoshop to acquire, compose, alter, manipulate, and format images for graphic design, advertising, presentations, websites, apps, and digital photography. Adobe Photoshop is the worldwide industry software used across various fields for image creation and enhancement. Students may use scanned images and/or digital photographs; however, a digital camera is not required for this course. Assignments will focus on the development of computer raster graphics skills necessary for success in multiple fields including but not limited to graphic design and digital imaging, digital photography, and graphic design through a series of specific visual design problems. **No Prerequisite.**

8567 Introduction to 3D Modeling and Animation

(9 weeks, .5 credit)

This introductory course is designed to teach the student the basics of three-dimensional modeling and animation with the computer. Studies of Three-dimensional modeling techniques using a computerized environment will be explored through various assignments and sequential demonstrations. Lighting, camera angles, atmospheric effects, and texture effects within the computer program will also be taught and discussed. Using the principles of 3D animation, students will create computer objects and set them to specific motion. Students will practice and develop observational skills that aid in understanding motion. Story boarding, sketchbook assignments, and critiques will assist in developing effective creative solutions for projects. All computer work is to be completed with Computer Lab PCs. Software to be used includes The Autodesk Creative Suite and various other supplemental software. Integration of other software for special effects includes Adobe Photoshop and Adobe Illustrator. **No Prerequisite**

BUSINESS AND INTEGRATED TECHNOLOGY

All courses in Business and Integrated Technology are only offered if there is sufficient enrollment.

5160 Accounting 1 (18 weeks, 1 credit)

This first-year course will provide students considering careers in the fields of Marketing, Business Administration, Finance, and Accounting with a firm foundation in accounting concepts. Students will learn the language of business, how to record, analyze, interpret, and report financial transactions for a sole proprietor or partnership. Course content will be combined with technology to provide real life experience through the use of Excel and business simulations.

5260 Accounting 2 (18 weeks, 1 credit)

This course is designed to strengthen the skills necessary for students seeking a college degree in business. Students learn about payroll, including commissions, depreciation of plant assets, and other transactions. Students will also learn how to interpret reports and records of a business. Advanced principles of computerized accounting and a business simulation will be used. **Prerequisite: Accounting 1, C or better.**

5161 Business Administration (9 weeks, .5 credit)

This course is designed for students who are planning on, or may be interested in, any business major in college. It provides a foundation in business management for all college business coursework. Course topics include the environment of business, ethical business issues, types of business ownership, and the impact of business management on production, marketing, financial management, human resources and other management responsibilities.

5061 Business Today (18 weeks, 1 credit)

Business Today is an introductory course that is beneficial to all students interested in learning more about their role as consumers, workers, and citizens. This course is strongly recommended for all students planning a business career. Course topics include banking, insurance, business management, entrepreneurship, career exploration, credit, and more.

5660 Consumer Law & Business Ethics (9 weeks, .5 credit)

This course presents the principles of law that govern the activities of individuals and business. Students will learn the legal rights of consumers, as well as the legal obligations of businesses. Topics include contract law, employment rights and duties, and consumer protection. A field trip to the Bucks County Courthouse, where students will experience the US legal system firsthand, will be used to reinforce course concepts. This course is valuable to both business and non-business students.

5661 Marketing & Advertising Fundamentals (9 weeks, .5 credit)

This highly interactive, hands-on course provides an overview of marketing in modern organizations. Students will learn basic concepts such as advertising, brand recognition, pricing, and competitive selling techniques. Students will be exposed to the terms, concepts, and frameworks used by practicing marketing managers and will have an opportunity to use newly acquired skills in developing and marketing an innovative product. This course provides an awareness of career opportunities and improves personal consumer knowledge.

5667 Sports & Entertainment Marketing (9 weeks, .5 credit)

Students will learn how businesses spark interest and gain profits from millions of consumers. Topics build upon introductory concepts covered in the Marketing and Advertising course and include sponsorships, licensing, event marketing, endorsements, TV commercials, and more. Computer simulations will help to expand knowledge beyond the traditional classroom setting. Topics covered will include amateur and professional sports teams, the business of entertainment, and special events. **Prerequisite: Marketing & Advertising Fundamentals, C or better.**

5062 Personal Finance (9 weeks, .5 credit)

This practical course allows students the opportunity to evaluate how current decisions impact our long range financial success. Topics covered include strategies for money management, how to properly budget and save money, preparing income taxes and the necessary skills needed to invest successfully. Students learn about identity theft, credit card debt, funding a college education, their first car, and home ownership all while maintaining a quality credit standing. This course provides 10th – 12th grade students with a solid foundation for making well informed, personal financial decisions leading them towards the goal of financial independence.

5163 Business Computer Applications (9 weeks, .5 credit)

This class is strongly recommended for all college-bound students as it will assist them in passing college technology placement tests that many require for admission. Students begin by learning advanced word processing skills using MS Word. They will then learn to use higher-level spreadsheet and database design techniques using MS Excel and MS Access in order to solve problems, organize and calculate data, and make fact-based decisions. This is an excellent class for students to practice these important skills needed to succeed in college and their future careers.

5561 Digital Marketing (9 weeks, .5 credit)

This course introduces students to the growing world of digital media and commerce. Students will integrate marketing and media design elements in a variety of software and online applications. Students will gain a fundamental understanding of the desktop publishing field using industry standard software, Adobe Creative Suite. Course activities include designing print media, multimedia communications and applying digital marketing concepts to social

media platforms including Snapchat, Instagram and other online applications. **Prerequisite: Marketing and Advertising Fundamentals, C or better.**

5525 Web Design

(9 weeks, .5 credit)

This course centers on digital media including web page design and a variety of photo editing techniques. Students will learn a broad range of skills and techniques necessary to design and build a Web presence on the Internet. Design issues specific to web-based presentations will be discussed including the application of different graphics, colors, web page fonts, and the use of CSS formats. Effective web page layout and navigation techniques will be explored and applied while using current industry standard tools. This is a creative, hands-on course that all future business owners should consider.

5526 Advanced Web Design

(9 weeks, .5 credit)

Advanced Web Page Design takes students closer to the professional level of web design. Students will have the opportunity to create a fictitious freelance web design company and work with clients to discover, design and develop professional websites for their business, organization, or club. In a hands-on, independent learning environment student will learn professional communication, in-

terviewing and time-management skills as well as advanced problem-solving techniques. Advanced web design uses industry standard software packages including Adobe’s Dreamweaver and Photoshop. **Prerequisite: Web Design, C or better.**

5668 College & Career Computer Skills

(9 weeks, .5 credit)

Taking this course will increase your efficiency using Microsoft Office products. Skills in Word, Excel, PowerPoint and keyboarding will ensure your success in high school, college and the workplace. The focus of the course is practical application and everyday features of these software programs. Exciting projects integrate online research and web-based resources and allow you to express your creativity in both writing and design, in this dynamic hands-on course.

5170 Entrepreneurship

(9 weeks, .5 credit)

In this future ready course students will experience the benefits and risks of self-employment and develop a specific competence in starting a small business. Innovative content will allow students the latitude to explore individual interests using 21st century skills, personalized learning and collaborative activities. Students will synthesize advanced business principles in the context of today’s digital society.

ENGLISH

Students are required to take four credits of English during grades 9-12, one English course per year. The required sequence of courses provides students with instruction in each area of language arts: reading, writing, speaking, and listening.

All sophomores must take a one-credit course, English 10. Following that, English 11 and English 12 must be taken in that sequence. Advanced Placement courses may be taken in place of English 11 and/or English 12. Advanced Placement Language can only be taken in the junior year, and Advanced Placement Literature can only be selected for senior year. For students with special interest in English and communication, enrichment electives are recommended rather than the acceleration of course sequence.

English elective courses are only offered if there is sufficient enrollment.

REQUIRED ENGLISH SEQUENCES			
Grade 9	Grade 10	Grade 11	Grade 12
MOST RIGOROUS PROGRAM			
For college-bound students applying to colleges designated as most competitive. Students in the most rigorous program should also consider electives such as SAT/ACT Preparation and Debate.			
English 9: Honors Level	English 10: Honors Level	AP English Language and Composition	AP English Literature and Composition
ACADEMIC PROGRAM			
For the majority of college-bound students. Students in the academic program should also consider electives such as SAT/ACT Preparation and Becoming a Better Writer.			
English 9: Academic Level	English 10: Honors Level OR English 10: Academic Level	English 11: Honors Level OR English 11: Academic Level	English 12: Honors Level OR English 12: Academic Level

Grade 10 English

[0000 Honors English 10](#)

[0020 Academic English 10](#)

(18 weeks, 1 credit)

The English 10 course focuses on literary genres and analysis of text, encouraging students to examine how authors develop their craft through genre conventions, devices, and stylistic elements. Students will analyze how writers use style, tone, and voice to communicate an idea. They will focus on close reading strategies in various genres to understand what tools authors use to achieve their purposes and how different genres can fulfill the same purpose through varying techniques. Students will understand the conventions of reading various genres, the differences between genres, and the characteristics of different genres. They will be introduced to nonfiction reading strategies and literary analysis with particular attention to tone and theme.

The Honors course of study includes variations in literature, materials, tasks, and assessments for honors level classes. Students in this course are expected to be avid readers and sophisticated writers able to move at an accelerated pace. In this course, students will seek and encounter challenging texts, discussions, and writing requirements that require deeper research and analytical skills. **Honors weighted-grade course for 0000.**

Grade 11 English

[0110 Advanced Placement English Language & Composition](#)

(18-weeks for a semester or 36-weeks (A/B schedule-all year), 1 credit)

Students will become skilled readers of prose written in a variety of periods, disciplines, and rhetorical contexts. They will produce expository, analytical, and argumentative essays that introduce a complex central idea and develop that idea with appropriate evidence drawn from primary and secondary sources, cogent explanations, and clear transitions. **A summer reading/writing assignment is required and must be completed before the start of the course. Students taking this course should plan to take the Advanced Placement English Language Test given in May. AP weighted-grade course. Prerequisites: B grade or better in English 10 or recommendation of 10th grade English teacher.**

[0100 Honors English 11](#)

[0120 Academic English 11](#)

(18 weeks, 1 credit)

The English 11 course is designed to equip students with the knowledge and skills to listen carefully, to evaluate arguments, to discern tone, and to analyze and implement rhetorical strategies in writing. They will read text that is selected to showcase the techniques that lead to an author's overall purpose. Students will understand that authors make stylistic choices and employ rhetorical and literary techniques based on their intentions, their subject, and their audience. Students will also craft their own writing to analyze rhetoric and to synthesize information into a cogent argument. Students will develop a unique writing voice, create sound and logical arguments, and be able to justify their stylistic and rhetorical choices.

The Honors course of study includes variations in literature, materials, tasks, and assessments for honors level classes. Students in this

course are expected to be avid readers and sophisticated writers able to move at an accelerated pace. In this course, students will seek and encounter challenging texts, discussions, and writing requirements that require deeper research and analytical skills. **Honors weighted-grade course for 0100.**

Grade 12 English

[0200 Advanced Placement English Literature & Composition](#)

(27 weeks, 1.5 credits)

Students will learn how to read literature perceptively and how to express responses to it. Students will study a representative sampling of works from several genres and literary periods. Students will learn to respond to language with increasing sensitivity and discrimination. **A summer reading/writing assignment is required and must be completed before the start of the course. Students taking this course should plan to take the Advanced Placement English Literature Test given in May. AP weighted-grade course. Prerequisites: B grade or better in English 11 or AP English Language or recommendation of 11th grade English teacher.**

[0210 Honors English 12](#)

[0220 Academic English 12](#)

(18 weeks, 1 credit)

Students will use critical reasoning skills to prepare them for post-secondary experiences. They will learn the value of literary analysis skills and examine how literature mimics the human experience across different perspectives, societies, and time periods. Students will examine the interrelationships that exist between text, self, and world. Students will gain a deep understanding of the connection between text and the human experience that justifies literature as a unique and important tool for examining and understanding humanity. They will demonstrate effective communication skills through a variety of mediums.

The Honors course of study includes variations in literature, materials, tasks, and assessments for honors level classes. Students in this course are expected to be avid readers and sophisticated writers able to move at an accelerated pace. In this course, students will seek and encounter challenging texts, discussions, and writing requirements that require deeper research and analytical skills. **Honors weighted-grade course for 0210.**

Electives

THESE COURSES PROVIDE GRADUATION CREDITS IN ELECTIVES ONLY. ENGLISH ELECTIVE COURSES ARE ONLY OFFERED IF THERE IS SUFFICIENT ENROLLMENT.

[0660 Becoming a Better Writer](#)

(9 weeks, .5 credit)

In this course, students will examine real-world models and writing purposes and use those mentor texts to help create their own writing in various modes. They will understand that writing purposes vary: and may include objective such as: express and reflect, inform and explain, evaluate and judge, inquire and explore, analyze and interpret, and take a stand/propose a solution. Students will practice honing their writing skills to fit each purpose and audience. Students will also develop a writing portfolio, which will focus on growth and revision, over the course of nine weeks. Students should

leave the course keener observers of real-world writing that they encounter every day; they will have a better understanding of how to continue to become a successful writer. **Note: Becoming a Better Writer may be taken more than once for elective credit with teacher approval.**

[0601 Debate](#)

(9 weeks, .5 credit)

Debate is designed to teach methods of logical thinking, argumentation, and formal debating procedures and skills. Students will learn the fundamentals of debate and will participate in several formal debates. Debate provides training in research, rhetoric, language skills, oratory, reasoning, politics, and philosophy. This course is especially useful for students planning a career in law, government, or business. **Note: Debate may be taken more than once for elective credit with teacher approval.**

[0661 SAT/ACT Test Preparation—English](#)

(9 weeks, .5 credit)

This SAT/ACT Preparation course is designed to improve a students' skills in the areas tested on the redesigned SAT that began in the Spring of 2016. Students will improve their ability to interpret, synthesize, and use evidence found in a wide range of sources, including literature, nonfiction, charts, and graphs. Students will also read a wide variety of arguments and analyze how authors develop and support their arguments. This course also helps students sharpen their test-taking skills in preparation for the ACT test.

[0662 Journalism](#)

(9 weeks, .5 credit)

Journalism is designed to teach techniques of journalistic writing as found in the news story, the editorial, the feature story, the interview, and the sports story. Students will write these types of articles and will study examples found in various newspapers. The course includes copy reading and proofreading, headline composition, page makeup, and word processing. Independent effort is demanded of journalism students. Interviews must often be conducted, and articles researched and written outside of class time. **Note: Journalism may be taken more than once for elective credit with teacher approval.**

[0665 Creative Writing](#)

(9 weeks, .5 credit)

Creative writing is designed to provide students with an opportunity to work with a variety of creative forms, including such options as: short stories, poems, essays, and plays. To stimulate personal awareness and creative potential, the use of a writer's notebook will be established. Students are expected to produce a collection of original works. **Note: Creative Writing may be taken more than once for elective credit with teacher approval.**

[0668 Theater: Acting Workshop](#)

(9 weeks, .5 credit)

Theater: Acting Workshop introduces students to the art of acting in a workshop environment. Students will participate in various body, voice, movement, and improvisation exercises during class time. Reading, memorizing, critiquing, and reflecting are all required components of the course. Various readings will introduce students

to different methods of acting, which students will then apply as they rehearse and present scenes to the class. These scenes will be critiqued by the instructor as well as by students in the class. **Note: Theater may be taken more than once for elective credit with teacher approval.**

[0602 The Language of Food](#)



(9 weeks, .5 credit)

An innovative reading- and writing-intensive course drawing on a vast array of food-focused texts by recognized experts in the genres of poetry, essay, memoir, fiction, journalism, expose, blog, and critical review, *The Language of Food* is a rigorous exploration of this undiscovered wealth of celebrated and authentic writing. This course begins with the felt experience of students, connecting them to mentor texts to guide their own writing about their own memories and perceptions of food. Through a multi-sensory, multi-genre deep dive into reading and writing, students will have increased opportunities to master informative, evocative, persuasive, critical, and creative writing. Culminating assignments involve a variety of presentational skills, including but not limited to podcast, video, presentation software, illustrated text, blogging, and many other options

[0603 Sports Literature](#)



(9 weeks, .5 credit)

This course will examine what intrigues people to be involved with sports in their everyday lives and why sports are as popular as they are with all age groups today. Students will be given a chance to analyze all types of contemporary sports literature, including novels, magazine/newspaper articles, radio/TV broadcasts, and movies to see the connection that sports have in society today. Through the study of sports in various forms of media, students will analyze why sports are so captivating. The course will allow students of all abilities the opportunities to discuss and analyze sports and their effects on our culture today. Students will look at pieces across a multitude of sports, and topics will deal with gender, controversy, race, sportsmanship, heroes/role models, hobbies, psychology, and mindset.

[0673 Introduction to Film Studies](#)

(9 weeks, .5 credit)

Introduction to Film Studies offers students the opportunity to develop visual literacy and analytical skills through the close examination of significant filmic texts. Students will learn the language and essential techniques of film (shot composition, camera angles, editing, etc.) in order to appreciate and explore the form's unique expressive abilities. This information will be combined with more familiar literary concepts (imagery, setting, symbolism, theme, etc.) to analyze the ways in which cinema is both similar to and different from written texts. Central concerns of the course include the translation of literature to cinema, the exploration of various filmic genres, the analysis and evaluation of films based on similar styles, themes and contexts, as well as the study of individuals who have made substantial contributions to cinema.

MEDIA PRODUCTION ELECTIVES

[0674 Media Production 1](#)

(9 weeks, .5 credit)

Students will learn the basics of video production and how to effectively communicate a message via video. These fundamentals include *pre-production skills*, which include researching, writing scripts, and storyboarding; *production skills*, which include operating video and audio equipment, single and multi-camera production, lighting, and various crew positions; and *post-production skills*, which include editing and audio mixing.

Students will display their knowledge both in written papers and by completing several hands-on group video projects. Whether you are interested in making videos as a hobby or pursuing journalism, broadcasting, or videography as a career, this introductory course will provide the necessary basics. This class is open to all students, grades 10-12.

[0675 Media Production 2](#)

(9 weeks, .5 credit)

This intermediate course further explores digital video production, concentrating on the role of the producer, writer, and director, and on advanced production and post-production techniques. Students will plan, research, write, produce, and edit informational video productions for distribution to audiences in school and in the community. Students may learn the journalistic skills of broadcast news, do investigative reporting, practice on-camera talent techniques, produce and direct interview shows, or create video features. Informative and persuasive writing will be required. Study hall and/or out-of-school time may be required. This course may be taken more than once for elective credit. **Prerequisite: C or better in Media Production 1 or instructor permission.**

[0676 Media Production 3](#)

(9 weeks, .5 credit)

Students demonstrating high levels of communication and production skills, motivation, and ability to work independently will produce real-world products: videos made for community partners like the hospital, museums, and businesses; videos made for nonprofit community groups like teen organizations; and videos made to explain and promote district educational programs and extra-curricular activities.

Projects will demand high levels of production and post-production skills. Students will engage in informational interviewing and other forms of research, organization of information, and development of creative solutions based on the information.

Outlining, scripting, and storyboarding will be necessary. Informative and persuasive writing will be required. Producers will create production schedules and timelines, organize and deploy production resources, and meet deadlines. Out-of-school time will be required for some productions. This course may be taken more than once for elective credit. **Prerequisite: B or better in Media Production 2 or approval of instructor.**

[0678 Media Production Practicum](#)

(9 weeks A/B, .25 credit)

This course is designated for juniors and seniors interested in pursuing a career in communications, advertising, television, or film. Each selected student will be scheduled into one of the communications courses, where he/she will plan and conduct practical instructional applications of their media production knowledge and skills. Enrollment is restricted to one student per section. **Note: This course may be taken more than once for elective credit. This course is graded Pass/Fail. Prerequisite: Students must have completed Media Production 1 and Media Production 2. Completion of application process and an interview with the subject teacher is required for acceptance into the course.**

FAMILY AND CONSUMER SCIENCES

All courses in Family and Consumer Sciences are only offered if there is sufficient enrollment.

[6159 The Young Child](#)

(9 weeks, .5 credit)

This course provides a study of child development from birth through age five. It offers a balanced selection of topics concerning growth and stages of development, including pregnancy and delivery, the care of children from infancy through preschool, and the importance of play. Students will have the opportunity to practice parenting skills with a computerized baby. Students also extend their understanding through a service-learning partnership at a local childcare facility. There are no prerequisites for this course.

[6161 The School-Age Child](#)

(9 weeks, .5 credit)

This course is designed for the student whose interests involve working with children, such as teaching, occupational therapy, physical therapy, speech therapy and medical career. It provides a study of human development from the elementary school-age child through adolescence. This program offers a selection of topics including the stages of growth and development, knowledge of self, the social issues affecting today's teenagers and their families, and developmentally appropriate instruction. Students extend their understanding through a service-learning partnership at a local elementary school. There are no prerequisites for this course.

[6162 Adult Living](#)

(9 weeks, .5 credit)

This course is designed to provide students with the skills necessary for living on their own. It will explore human development from late adolescence through adulthood. A selection of topics, such as interpersonal relationships, communication issues, preparing healthy foods, family relationships, automotive basics, consumer issues, and more will be presented. Students will extend their learning through a service-learning partnership at a provided senior center. There are no prerequisites for this course.

[6264 American Cuisine](#)

Not available at CB East

(9 weeks, .5 credit)

Regional American fare will be prepared as students explore the amazing variety of foods found throughout our country. Food labs include main dishes, side dishes and desserts with an emphasis on food preparation, safety and sanitation. Current topics related to nutrition and the food industry are discussed. There are cooking competitions in this course for students to demonstrate their learning. There are no prerequisites for this course.

[6265 Global Gourmet](#)

Not available at CB East

(9 weeks, .5 credit)

This class is designed for the student who is interested in learning about food customs and cooking practices around the world. Each selected country's geography, history, and culture will be explored and connected to the food habits of its people. Students will also study safety and sanitation practices and participate in cooking competitions. There are no prerequisites for this course.

[6266 Food Science](#)

CB East Only

(9 weeks, .5 credit)

Food or science experiment? In this class you will examine the microbiology of food, safe cooking and handling procedures, physical and chemical changes that occur in food preparation, and the role of government in keeping food safe. Students will have the opportunity to create their own food by applying the concepts of food science. There are no prerequisites for this course.

[6267 Nutrition](#)

CB East Only

(9 weeks, .5 credit)

If you are what you eat, what are you? Students will explore how various foods affect the body. This course will include an overview of digestive and metabolic processes involved in the body's absorption and use of important nutrients. There are no prerequisites for this course.

HEALTH AND PHYSICAL EDUCATION

All elective courses in Health and Physical Education are only offered if there is sufficient enrollment. Please note 7061/7062 PE/Health is a graduation requirement.

[7061 PE/Health](#)

(9 weeks, every day .5 credit)

[7062 PE/Health](#)

(18 weeks A/B, .5 credit)

This required, coeducational course integrates the development of physical fitness and sports within units of study aimed at instilling health knowledge, desirable personal habits, positive attitudes, and good decision-making skills. The Physical Education portion of this course will include Team Sports, Lifetime Sports, Personal Fitness, Cooperative Activities and much more. Health education included in this course Nutrition, First Aid, Substance Abuse, Mental Health, Stress Management, Healthy Relationships, and HIV/AIDS. This

process of learning about the needs and care of the human mind and body is essential for optimal living.

[7069 Stress Management and Healthy Living](#)

(9 weeks A/B, .25 credit)

This elective, coeducational course provides students with an opportunity to learn about stress, its causes, and various ways to effectively handle its impact on their life. Topics covered include: What is stress?, exercise, relaxation, nutrition, awareness based interventions, and behavioral techniques. Various techniques will be practiced throughout the course and appropriate clothing is required to participate. **This course may be taken more than once.**

[7562 Advanced Health](#)

(9 weeks, .5 credit)

This nine-week course is designed for students with an interest in health or medicine. Course content includes the study of basic anatomy (structure) and physiology (function) of the human body. The focus of the course will analyze the impact of a disease or a life/health problem on the physical, psychological, and social well-being of the individual. Various techniques will be practiced throughout the course and appropriate clothing is required to participate.

[7064 Team Sports](#)

(9 weeks, A/B, .25 credit)

This nine-week course is designed for students in grades 10-12 who enjoy the competition of team sports. Activities include team handball, floor hockey, volleyball, lacrosse, soccer, netball and other team activities that require cooperation, leadership, and decision-making skills. Emphasis will be on team participation and strategic competition within a sport. **This course may be taken more than once.**

[7065 Lifetime Sports](#)

(9 weeks, A/B, .25 credit)

This course is designed for students who enjoy individual competition and recreational activities. The course will highlight exposure to activities that can be carried over to adulthood. Activities may include: tennis, table tennis, badminton, frisbee, adventure/teambuilding, walking, pickleball, archery, golf, shuffle board, bocce ball, bowling, and other lifetime pursuits. Students will gain an understanding of game rules, strategies, fair competition, sportsmanship and gamesmanship in all activities. **This course may be taken more than once.**

[7066 Personal Fitness](#)

(9 weeks, A/B, .25 credit)

This course is designed for students in grades 10-12 with an interest in improving their physical fitness levels. Students will develop personal fitness goals and create a personal fitness plan while in class. They will receive instruction in all aspects of fitness: including nutrition, lifting techniques, kettle bells, yoga, free weights, medicine balls, and other cutting-edge training. Various forms of cardiovascular training will be studied in class. **This course may be taken more than once.**

7063 Fitness Trends

(9 weeks, A/B, .25 credit)

This elective course is designed for students who are interested in enhancing their coordination, agility, movement skills, and overall fitness levels. This course will emphasize on the five components of fitness: flexibility, aerobic fitness, muscular strength, muscular endurance, and body composition. Activities may include, but are not limited to: cardio-kickboxing, yoga, pilates, TRX resistance bands, kettle bells, circuit training, Zumba, P90x, and more. **This course may be taken more than once.**

7068 Aquatics

CB-East and CB-South only

(9 weeks, A/B, .25 credit)

Aquatics is an elective course for students interested in participating in water activities and games in the pool setting. This course will include water polo, newcombe volleyball, lap swimming, leg and arm workouts, endurance training, heart monitoring, and more. Activities and skills instructed in this course will increase cardiovascular development, instill a knowledge of correctly performed aquatic stroke techniques and efficiencies, teach water safety and develop an

appropriate workout program to be used as a lifelong leisure-time activity. **This course may be taken more than once.**

7060 Unified Physical Education



(18 weeks A/B, .5 credit)

Unified Physical Education is an elective course that offers a unique opportunity for students of varying ability levels and backgrounds to collaborate and serve as both, a peer mentor and learner. This course is designed to provide students (with and without disabilities) the opportunity to experience all forms of sport activities in a modified, recreational, and safe environment. The focus of this course is on the physical, intellectual, and social growth of all participants. Engaging in physical activity and sport alongside peers will support and foster social relationships within the school community. This course will allow each student to gain an appreciation and understanding of the various physical and mental abilities and disabilities that can be present in a physical activity setting. **Students interested in taking this elective must submit an online peer mentor application which can be found on the district Health & PE website. <https://www.cbsd.org/Page/1499>**

MATHEMATICS

Because of the sequential development of the mathematics curriculum, students must attain the prerequisites in the previous course before advancing to a more difficult level. Students with low grades are encouraged to repeat courses in order to master concepts required for sequential classes.

The Mathematics Department recognizes the use of calculators as a valuable tool for learning in the classroom, and calculators will be used extensively for class work and homework in all courses. The district uses TI-83 and TI-84 graphing calculators in the classroom. Students are encouraged to purchase their own graphing calculator, whether this brand or one with similar functions. In certain advanced courses, graphing calculators with specific capabilities are important for daily classroom performance and are required for Advanced Placement Examinations. While no specific brands are endorsed, there are restrictions on the type of calculators allowed on classroom tests and final exams. Calculators that do operations with variables, such as the TI-89, TI-92, and HP49G, will not be permitted to be used on district final exams, even though they may be used on some nationwide tests. Teachers have discretion as to whether these types may be used for particular classroom-related purposes.

Honors level mathematics courses in Central Bucks School District:

- are more challenging than standard courses
- require students to take a greater responsibility for their learning
- require students to move at a faster pace than the equivalent standard level course
- are different from the equivalent standard level courses in both the quality of the work expected and the quantity of the work required inside and outside of the classroom
- expand on the goals and objectives that are also taught in our standard version of the same courses
- are created for students who have demonstrated an advanced level of both interest and achievement in prior mathematics classes
- offer challenging and higher-level courses for students who aspire to an advanced level of learning and will likely participate in our AP program
- are awarded a .25 weight in recognition of the fact that they are more demanding and have requirements that go beyond those of the standard mathematics courses

AP level mathematics courses in Central Bucks School District:

- encompass all of the points listed in the Honors level statements
- cover the breadth of information, skills and assignments found in corresponding college courses
- align with the standards and expectations of leading institutions
- provide motivated and academically prepared students with the opportunity to study and learn at the college level
- are open and available to all students who have met the prerequisites of the course and are motivated to complete the work required to be successful in a college course while still in high school
- an AP course follows a curriculum that is approved by the College-Board
- engage students in challenging problem solving and critical thinking activities on a regular basis
- prepare students to take the AP exam for the course given annually in May
- are awarded a 1.0 weight in recognition of the fact that they are more demanding and have requirements that go beyond those of the standard mathematics courses

MATHEMATICS SEQUENCE

These sequences represent typical pathways through high school mathematics classes. Additional pathways are possible. If you have any questions, your current mathematics teacher or guidance counselor will be able to answer them for you.

Grade 9	Grade 10	Grade 11	Grade 12
Advanced Placement Sequence			
College-bound students planning a career in medicine, engineering, science, or mathematics should consider this sequence, especially if they are applying to colleges designated as most competitive. Recommended electives for this level include AP Statistics and standard and AP Computer Programming courses in Grades 10-12.			
Honors Algebra 2/Trig	Honors Precalculus/Trig <u>Optional courses for students who double up:</u> AP Computer Sci Principles, AP Statistics	AP Calc AB <u>Optional courses for students who double up:</u> AP Comp Sci Principles, AP Comp Sci A, AP Statistics	AP Calc BC <u>Optional courses for students who double up:</u> AP Comp Sci Principles, AP Comp Sci A, AP Statistics
Academic Sequence			
College and non-college bound students seeking a complete study of high school mathematics. Students planning a career in medicine, engineering, science, or mathematics should consider additional mathematics courses including Statistics and Data Analysis, AP Statistics, or Computer Programming courses in Grades 11 and 12.			
Geometry/Trig	Alg 2/Trig (standard or honors) <u>Optional courses for students who double up:</u> Precalculus (standard or honors), AP Comp Sci Principles	Precalc/Trig (standard or honors) Or Alg 3/Trig <u>Optional courses for students who double up:</u> AP Comp Sci Principles, AP Comp Sci A AP Statistics	Calculus 1, AP Calc AB or Stat/Data Analysis <u>Alternative courses:</u> AP Comp Sci Principles, AP Comp Sci A, AP Statistics
Algebra 1 or Algebra 1B	Geometry/Trig	Algebra 2/Trig	Precalculus/Trig or Stat/Data Analysis <u>Alternative course:</u> Algebra 3/Trig
Algebra 1A	Algebra 1B	Geometry	Algebra 2
	Algebra 1A	Algebra 1B	Geometry

2540 Algebra 1A

(18 weeks, 1 credit)

This course is intended for college bound students who have successfully completed prealgebra and who have demonstrated an understanding of all concepts of the course. It extends previously learned arithmetic skills to expressions involving variables. This course is a formal study of Algebra 1 concepts including integers, rational numbers, expressions, solving linear equations, graphing linear functions, writing linear equations, and exponents.

Prerequisite: Approval of the Math Transition Committee. Please contact your school counselor.

2640 Algebra 1B

(18 weeks, 1 credit)

Algebra 1 builds on the concepts studied in Algebra 1 A. This is the second course in an in-depth two-year study of formal Algebra. The fundamental operations and their properties are studied. Topics include: linear functions and inequalities, systems of equations, exponents and polynomials, factoring polynomials, rational expressions, radicals and quadratic functions. Problem solving, application, communication and reasoning are emphasized throughout the course. Students in this class will take the Algebra 1 Keystone Exam. **Prerequisite:** (2920 or 2540) Algebra 1A, grade of C- (70%) or better for the year or approval of the Math Transition Committee. Please contact your school counselor.

[2645 Geometry](#)

(18 weeks, 1 credit)

The curriculum in this course includes a comprehensive study of Euclidean Geometry. The emphasis of this course is the application of congruency, similarity, parallelism, perpendicularity, and area/volume of common geometric figures. **Prerequisite: (2640) Algebra 1B or teacher recommendation.**

[2141 Algebra 2](#)

(18 weeks, 1 credit)

This course is designed for the student who has successfully completed Geometry (course # 2645) and includes a review of algebra, polynomials and factoring, exponents, radicals, sequences and series, matrices, and concepts of probability and statistics. **Prerequisite: (2645) Geometry or teacher recommendation.**

[2541 Applied Mathematics](#)

(18 weeks, 1 credit)

This course is designed for students who have already completed both Algebra 2 and Geometry. Students will apply mathematics, algebra, and geometry to real-life situations. Typical workshop situations might include designing a landscape or home, tracking stocks, surviving a financial crisis, and planning for your financial future. **Prerequisite: (2640) Algebra 1B and (2645) Geometry, or approval of the Math Transition Committee. Please contact your school counselor.**

[2122 Geometry/Trig](#)

(18 weeks, 1 credit)

This course is designed for students who have successfully completed Algebra 1 or Algebra 1 B. Geometry/Trig covers congruency, similarity, parallelism, perpendicularity, areas, and volumes. Concepts from coordinate geometry are reviewed with an emphasis on the integration of algebra and geometry. Trigonometry topics may include indirect measurement, and theorems/applications relating to tangents, apothems, and inscribed polygons. **Prerequisite: (2916) Algebra 1B or (2915) Algebra 1, C- or better AND teacher recommendation for students taking the high school version of Algebra 1B (2640).**

[2520 Algebra 2/Trig](#)

(18 weeks, 1 credit)

This course is designed for students with good mathematical ability and interest. Students will simplify a variety of expressions (radical, exponential, quadratic, polynomial, rational). Students will solve linear, quadratic, and polynomial equations and will graph and analyze linear, quadratic, and polynomial functions. Other topics include series, sequences, and trigonometry of the right triangle. **Prerequisite: (2122 or 2901) Geometry/Trig, C- or better or teacher recommendation.**

[2530 Honors Algebra 2/Trigonometry](#)

(1 credit)

This course is an honors course designed for students with outstanding mathematical ability and interest who have mastered the concepts and skills of Algebra 1 and Geometry/Trig. Honors mathematics courses require students to move at a faster pace than the equivalent

standard level course and they are different from the equivalent standard level course in both the quality of the work expected and the quantity of the work required inside and outside of the classroom. Students taking Honors Algebra 2/Trig will have a more rigorous study of the concepts in preparation for future AP courses in mathematics. Students will simplify a variety of expressions (radical, exponential, quadratic, polynomial, rational). Students will solve linear, quadratic, and polynomial equations and will graph and analyze linear, quadratic, and polynomial functions. Other topics will include series, sequences, and trigonometry of the right triangle.

This course is weighted at .25 as a recognition of the fact that it is more demanding and has more requirements that go beyond those of the standard mathematics course. **Prerequisite: (2901 or 2122) Geometry/Trig, A- (90%) or better and teacher recommendation**

[2221 Algebra 3/Trig](#)

(18 weeks, 1 credit)

This course is intended for college bound students who have successfully completed Geometry/Trigonometry AND Algebra 2/Trigonometry. This course is an extension of algebra with topics including linear equations, inequalities, exponential and logarithmic equations, domain and range graphically and algebraically, solving and graphing quadratic and higher order polynomial equations as well as rational functions. This course also has strong focus on trigonometric topics including right triangle trigonometry and the unit circle, law of sines and cosines and finding exact trigonometric values. **Prerequisite: (2520) Algebra 2/Trig, C- or better or teacher recommendation.**

[2110 Precalculus/Trig](#)

(18 weeks, 1 credit)

Designed for students who have successfully completed both Geometry/Trig and Algebra 2/Trig, Precalculus/Trig is an extension of the concepts covered in the two prerequisite courses with an emphasis on the functional aspects necessary for preparation for the study of calculus. Polynomial, exponential, logarithmic, and trigonometric functions are addressed in this course. Trigonometric topics include the solution of trigonometric equations, identity manipulations, and transformation graphing, including work with amplitude, period, and phase shift. Combinatorics, probabilities, statistics, and data analysis will be introduced. **Prerequisite: (2520) Algebra 2/Trig, B- or better or teacher recommendation, or (2900 or 2530) Honors Algebra 2/Trig, C- or better or teacher recommendation, or (2221) Algebra 3/Trig (formerly known as Intermediate Math Concepts), C- or better or teacher recommendation.**

[2111 Honors Precalculus/Trig](#)

(18 weeks, 1 credit)

This course is an honors course designed for students with outstanding mathematical ability and interest who have mastered the concepts and skills of Algebra 2/Trig. Honors mathematics courses require students to move at a faster pace than the equivalent standard level course and they are different from the equivalent standard level course in both the quality of the work expected and the quantity of the work required inside and outside of the classroom. Students taking Honors Precalculus/Trig will have a more rigorous study of the

concepts in preparation for future AP courses in mathematics. Honors Precalculus/Trig is an extension of the concepts covered in the two prerequisite courses with an emphasis on the functional aspects necessary for preparation for the study of calculus. Polynomial, exponential, logarithmic, and trigonometric functions are addressed in this course. Trigonometric topics include the solution of trigonometric equations, identity manipulations, and transforming graphs, including work with amplitude, period, and phase shift. Combinatorics, probabilities, statistics, and data analysis will be introduced. **Incoming 10th and 11th graders who intend to take AP Calculus AB should take Honors Precalculus/Trig to more fully prepare for the pace and rigor of an AP course. The decision to take Honors Precalculus/Trig should not be taken lightly, and this decision should be discussed with your Algebra 2/Trig teacher so there is no question regarding the expectation for the course.**

This course is weighted at .25 as a recognition of the fact that it is more demanding and has more requirements that go beyond those of the standard Precalculus/Trig course. **Prerequisite: (2520) Algebra 2/Trig, A- or better and teacher recommendation, or (2900 or 2530) Honors Algebra 2/Trig, B- or better and teacher recommendation.**

[2625 Statistics and Data Analysis](#)

(18 weeks, 1 credit)

Statistics is the study of the fundamentals of descriptive and inferential statistics. Topics include data descriptions using graphs, bivariate data, regression lines, probability and probability distributions, measures of center and variability, confidence intervals, and significance testing. The TI-83 graphing calculator is used extensively in this course and is necessary for students to successfully complete the course. Any graphing calculator will suffice provided it has statistical menus. The statistical menus should include mean, median, standard deviation, quartiles, lists and list commands, and distributions (binomial, geometric, normal, and Poisson). **Prerequisite: (2520 or 2900) Algebra 2/Trig, C- or better.**

[2101 Calculus 1](#)

(18 weeks, 1 credit)

Calculus 1 is the study of limits and change with respect to time. Differential calculus and some integral calculus will be covered in the course. Topics include functions, derivatives and their applications, and integral calculus and its applications. Calculus 1 parallels the first semester of most college calculus courses. Students must have an excellent command of algebraic processes to successfully complete this course. **Note: Students requiring a complete study of calculus for college preparation should follow Calculus 1 with Calculus 2. Students electing these two courses are not expected to take the Advanced Placement Examination; consequently, no weighted grade credit is awarded for Calculus 1 and 2. Prerequisite: (2110) Precalculus/Trig, B- or better**

[2103 Calculus 2](#)

(18 weeks, 1 credit)

Calculus 2 will continue the Calculus 1 course. Topics will include transcendental functions, techniques of integration, improper integrals, and numerical approximations. Infinite series and polar coordi-

ates will also be studied. This course parallels the second semester of most college calculus courses. **Note: Students requiring a complete study of calculus for college preparation should follow Calculus 1 with Calculus 2. Students electing these two courses are not expected to take the Advanced Placement Examination; consequently, no weighted grade credit is awarded for Calculus 1 and 2. Prerequisite: (2101) Calculus 1, C- or better or teacher recommendation.**

Advanced Placement Level Courses

[2005 Advanced Placement Computer Science A](#)

(18 weeks, 1 math or elective credit)

This course is equivalent to a first-semester college course in Computer Science using the Java language. Students will learn problem solving by learning and applying a programming technique known as Object-Oriented Programming (OOP). The major points of emphasis are programming design and methodology, algorithm development, classes and methods, one- and two-dimensional arrays, and the Case Study. Students who take this course should plan to take the Advanced Placement Computer Science A Test given in May. AP weighted grade course. Up to one credit from Computer Science courses may be used to fill your graduation requirements for mathematics. **Prerequisite: (2004) Introduction to Java, AP Comp Sci Principles, or teacher recommendation.**

[2007 Advanced Placement Computer Science Principles](#)

(18 weeks, 1 math or elective credit)

AP Computer Science Principles introduces students to the central ideas of computer science, instilling the ideas and practices of computational thinking and inviting students to understand how computing changes the world. The rigorous course promotes deep learning of computational content, develops computational thinking skills, and engages students in the creative aspects of the field. Students who take this course should plan to take the Advanced Placement Computer Science Principles Test given in May. AP weighted-grade course. Up to one credit from Computer Science courses may be used to fill your graduation requirements for mathematic. **Prerequisite: (2520) Algebra 2/Trig, B- or better or teacher recommendation.**

[2102 Advanced Placement Calculus AB](#)

(27 weeks, 1.5 credits)

This course provides a complete study of differential and integrated calculus. It is designed to prepare students for the Advanced Placement Calculus AB Examination. The course outline completes the recommended topics described by the College Board **at a fast and intense pace** to guarantee time for practice testing exercises. **Students selecting this course should plan to take the Advanced Placement Calculus AB Examination in May. AP weighted-grade course. Prerequisite: (2111) Honors Precalculus/Trig, B or better, or (2110) Precalculus/Trig, A- or better or teacher recommendation.**

[2200 Advanced Placement Calculus BC](#)

(27 weeks, 1.5 credits)

This advanced course reviews the concepts of calculus, emphasizing and extending introductory topics in differentiation, and integration. It is designed to prepare students for the Advanced Placement Cal-

culus BC Examination. The course outline completes the recommended topics described by the College Board **at a fast and intense pace** to guarantee time for practice testing exercises. **Students selecting this course should plan to take the Advanced Placement Calculus BC Test in May. AP weighted-grade course. Prerequisite: (2102) AP Calculus AB, B or better or teacher recommendation.**

2601 Advanced Placement Statistics

(18 weeks, 1 credit)

The purpose of this course is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. The course will expose students to four broad conceptual themes: (1) exploring data – observing patterns and departures from patterns, (2) planning a study – deciding what and how to measure, (3) anticipating patterns – producing probability and simulation, and (4) statistical inference – confirming models. The course outline covers the topics recommended by the College Board. The **pace is fast and intense** in order to assure time for practice testing exercises. **Students who take this course should plan to take the Advanced Placement Statistics Test given in May. AP weighted-grade course. Prerequisite: (2110) Precalculus/Trig 3, B or better or teacher recommendation, or (2111) Honors Precalculus/Trig 3, B- or better or teacher recommendation**

9103 Algebra Lab

(18 weeks, A/B day schedule or 9 weeks every day, .5 Math credit)

The goal of this class is for students to achieve proficiency on the math standards as measured by the Algebra 1 Keystone Exam. Algebra Lab is a high school level intervention program designed to help students improve their understanding of the PA Common Core Standards addressed in an Algebra 1 course. Test-taking skills, open-ended problem-solving, and familiarity with the kinds of problems asked on the Algebra 1 Keystone Exam are stressed. Students are identified for participation based on their performance on the Algebra 1 Keystone Exam. Participation is required each year until the student scores proficient or advanced on the exam.

Mathematics Elective Courses

MATH elective courses are only offered if there is sufficient enrollment.

2003 Introduction to Computer Programming

(9 weeks, .5 math or elective credit)

Introduction to Computer Programming presents the fundamental concepts of programming through the use of Alice. Alice is an object-oriented educational programming language with an integrated development environment. Students will create computer animations and virtual worlds using 3D models. This course is designed to introduce and emphasize algorithmic thinking and expression, the concept of abstraction, and problem solving. Up to one credit from Computer Science courses may be used to fill your graduation requirements for mathematics. **Prerequisite: (2520) Algebra 2/Trig, C- or better or teacher recommendation.**

2004 Introduction to Java

(9 weeks, .5 math or elective credit)

This course is an introduction to the programming language Java. Emphasis is placed on language syntax and program design and

structure. Topics include computer history and architecture, software development life cycle, computer ethics, fundamentals of Java, and object-oriented programming, data types, control statements, and strings. Students planning to take the Advanced Placement Computer Science A Course in the spring should select this course. Up to one credit from Computer Science courses may be used to fill your graduation requirements for mathematics. **Prerequisite: (2520) Algebra 2/Trig, C- or better or teacher recommendation.**

2623 SAT/ACT Test Preparation – Math

(9 weeks, .5 elective credit)

This course is designed as a review of previously learned mathematics to prepare students for the mathematics portion of the SAT. Students planning to take the ACT will also find this course beneficial since the course will teach problem-solving skills and effective test-taking strategies. Technology will be integrated throughout the course. An instructional fee will be charged to students who wish to use the SAT review book as a consumable workbook. **This course may NOT be used for Math credit. Prerequisite: Students taking this course must have COMPLETED courses in Algebra 2 and Geometry.**

MUSIC

All high school music courses are offered on an elective basis. Performance classes meet for ninety minutes on alternate days for the entire year. Students must be enrolled in music performance classes (Symphonic Band, Concert Band, Choir, Chorus or Orchestra) to be eligible to audition for the PMEA District and BCMEA County Music Festival, or to participate in connected co-curricular music activities, including marching band, and instrumental and vocal ensembles. Many of these groups also participate in exhibitions and competitions. MBIT students who have an interest in co-curricular music activities should speak to their guidance counselor. All courses in Music are only offered if there is sufficient enrollment.

8630 Music Creation, Production and Marketing

(18 weeks, A/B schedule .5 credit)

This course is designed for students who wish to learn how to create, produce, and market new music. The course will include analysis of song structure, lyrics, chord patterns, and arranging. Additionally, students will learn how to foster relationships with local businesses and charitable organizations. Upon completion, students will come away with at least one finished or reworked song and a plan to promote it through digital media or social media platforms. Students will have access to instruments like guitar, piano, bass, drums, and other forms of digital media/software.

8640 Musical Theater and Tech

(18 weeks, A/B schedule, .5 credit)

This hands-on course will focus on all aspects of musical theater production, including stage tech, set design, sound, lighting, and performing. In addition, students will get a brief overview of the history of musical theater and learn the important trends and ideas in the world of musical theater today. The course will culminate in projects

and performances that show an understanding of all aspects of musical theater and will provide a foundation for a future in musical theater production.

8663 Concert Band

(36 weeks, A/B schedule, 1 credit)

Concert Band is designed for students in grades 10-12 who choose to continue their educational interest in band music. Students gain experience playing a variety of musical styles and continue their development of musical skills and techniques. Public performances are scheduled throughout the year. Individual instruction on specific instruments may take place within the larger group rehearsal. However, ensemble experience and the individual's performance as a responsibility to the group's overall success are emphasized. Only students who are enrolled in Band are eligible to audition for County and District Band, as well as for select instrumental ensembles.

Participation in the band program includes required after-school and evening rehearsals and performances as determined by the director. All band members are encouraged to participate in the Marching Band. Marching Band is one of the most visible co-curricular activities in the high school and provides the opportunity for motivated musicians to attain higher levels of performance. **Prerequisite: Participation in the middle school band program or the equivalent, by audition, and/or approval of the high school band director.**

8660 Symphonic Band

(36 weeks, A/B schedule, 1 credit)

Symphonic Band is offered to students in grades 10-12 who play woodwind, brass, or percussion instruments. Public performances including concert and marching settings are scheduled throughout the year. Individual instruction on specific instruments may take place within the larger group rehearsal. However, emphasis is on the ensemble experience and on the individual's performance as a responsibility to the group's overall success. Only students who are enrolled in Band are eligible to audition for County and District Band, as well as for select instrumental ensembles.

Participation in the band program includes required after-school and evening rehearsals and performances as determined by the director. All band members are encouraged to participate in the Marching Band. **Prerequisite: Participation in the Concert Band is preferred but not required. Admission is by audition or approval of the high school band director.**

8665 Jazz Ensemble

(36 weeks, A/B schedule, 1 credit)

Jazz Ensemble is offered as an opposite day companion course to Symphonic Band. Students enrolled in this course must also be enrolled in Symphonic Band. The course is open by audition to students who play the saxophone, trumpet, trombone, piano, guitar, bass, or drums.

Classes are devoted to a study of a wide variety of jazz music and styles. Emphasis is placed on the development of the style, interpretation, and the technical skills needed for jazz performance, as well as the historical aspects of this American art form.

Participation in the Jazz Ensemble includes required after-school and evening rehearsals and performances as determined by the director. This ensemble will be involved in several jazz competitions and festivals in the spring that generally occur on Friday evenings and some Saturdays. **Prerequisite: Audition and/or approval by high school jazz ensemble director.**

8661 Chorus–Grade 10

(36 weeks, A/B schedule, 1 credit)

Chorus is offered to sophomores who enjoy singing in a vocal ensemble. Active participation and pursuit of individual musical growth are essential for the successful performance of choral music. Students will learn to develop proper vocal technique and performance discipline. Emphasis will be placed on training the singers to become better musicians through the use of choral repertoire.

The chorus will perform both classical and contemporary works at the appropriate developmental level. A repertoire will be chosen that reflects a variety of styles, forms, and cultures and includes both sacred and secular texts. School and community performances will be scheduled throughout the year. Only students who are enrolled in Chorus are eligible to audition for County and District Chorus as well as for select vocal ensembles. Participation in the choral program includes required afterschool and evening rehearsals and performances as determined by the director. Participation in the spring trip is optional but encouraged. **Prerequisite: Participation in the middle school choral program is preferred but not required.**

8662 Choir–Grades 11, 12

(36 weeks, A/B schedule, 1 credit)

Choir is offered to juniors and seniors who enjoy singing in a vocal ensemble and have completed at least one year of high school music training. Active participation and pursuit of individual growth are essential for the successful performance of choral music. Students will continue to develop proper vocal technique and performance discipline.

The choir performs both classical and contemporary works at the highest standard. A repertoire will be chosen that reflects a variety of styles, forms, and cultures and includes both sacred and secular texts. School and community performances will be scheduled frequently throughout the year. Only students who are enrolled in Chorus are eligible to audition for County and District Chorus as well as for select vocal ensembles.

Participation in the choral program includes required afterschool and evening rehearsals and performances as determined by the director. Participation in the spring trip is optional but encouraged. **Prerequisite: Participation in Chorus – Grade 10 is preferred but not required.**

8664 Orchestra

(36 weeks, A/B schedule, 1 credit)

Students participating in string orchestra will actively engage in the creation and performance of orchestral music literature, which will expose students to a variety of musical genres and periods. Students will advance their musical development through rehearsal and performance in small and large ensemble settings.

Orchestra is offered to students who play violin, viola, cello, or double bass. Students playing other instruments may only join orchestra with the approval of the high school orchestra director.

Performances in the school and community will be scheduled throughout the year. Only students who are enrolled in Orchestra are eligible to audition for County and District Orchestra, as well as for select string ensembles. Participation in the orchestra includes required after-school and/or evening rehearsals and performances as determined by the director. **Prerequisite: Participation in the middle school orchestra program or the equivalent, by audition, and/or approval of the high school orchestra director.**

8667 Music Theory

(18 weeks, A/B schedule .5 credit)

Music Theory develops the basic rudiments of music and introduces functional harmony studies. This course is designed for music performers who wish to further their musical understanding. This course is also intended to prepare students for Advanced Placement Music Theory.

8620 Music Technology

(18 weeks, A/B schedule .5 credit)

This course allows students to explore modern music technology applications, by utilizing digital audio workstations (DAW). Students will learn in a hands-on environment using notation and industry standard software to experiment with music production. Students will also learn practical skills related to audio mixing/mastering, music notation, microphone techniques, film production fundamentals, and synthesized sound. **Prerequisite: Fundamental notation skills are strongly encouraged.**

8600 Advanced Placement Music Theory

(36 weeks, A/B, 1 credit)

AP Music Theory provides an in-depth study of the processes of music performance, composition, and analysis by focusing on the development of (1) complex aural skills, (2) skills in written analysis of functional harmony, (3) sight singing techniques, (4) musical composition skills, (5) keyboard skills, and (6) understanding of musical form and history. Students who take this course should have acquired basic skills in vocal or instrumental performance. **Students taking this course should plan to take the Advanced Placement Music Theory Test given in May. AP Weighted-Grade Course. Prerequisite: Successful completion of Music Theory OR a passing score on the Elective Placement Test. NOTE: AP Music Theory will be offered every other year. At CB West it will be offered for 2020-2021. At CB East and CB South, it will be offered for 2021-2022. Music students should plan accordingly.**

PEN (Gifted Program)

9600 PEN–Grades 10–12

(9 weeks, .5 credit)

This course provides students identified as gifted with the opportunity to dialogue with others of similar abilities and to pursue areas of mutual and individual interest. Students are involved in readings, discussions, lectures, and other activities designed to foster critical thinking skills and the exchange of ideas. At the beginning of the course, students may choose to take PEN for a grade as a pass/fail course. In either case, credit will be awarded if the course is passed.

SCIENCE SEQUENCE

These sequences represent typical pathways through high school science classes. Additional pathways are possible. If you have any questions, your current science teacher or guidance counselor will be able to answer them for you.

Grade 9	Grade 10	Grade 11	Grade 12		
Most Rigorous Sequence					
College-bound students planning a career in general science, medicine, engineering or Earth/space science should consider this sequence, especially if they are applying to colleges designated as most competitive.					
Honors Science 9	AP, Honors Biology and Interest Dependent Elective	Chemistry (Honors or AP), Physics (Honors or AP) and Interest Dependent Electives such as: AP Biology, AP Environmental Science and Human Anatomy and Physiology.			
Honors and Academic Sequence					
Students are required to take a Biology course in grade 10. Courses that qualify for this requirement are: 3010 Honors Biology, 3020 Academic Biology, and 3040 Practical Biology. Central Bucks also recommends that all college-bound students take at least one course in Chemistry and Physics.					
Science 9 (Honors or Academic)	Biology (Honors, Academic or Practical)	Chemistry (Honors, Academic, or Conceptual) and/or Interest Dependent Elective	Physics (Honors or Academic) and/or Interest Dependent Elective		
<p>Interest Dependent Electives Include:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Grade 10 – 12 Astronomy (9 weeks, .5 credit) Oceanography (9 weeks, .5 credit) AP Environmental Science (18 weeks, 1 credit)* Environmental Sustainability (18 weeks, 1 credit)</p> <p>Human Anatomy and Physiology (18 weeks, 1 credit)* Applied Human Anatomy & Physiology (18 weeks, 1 credit)* (CB West only) AP Chemistry (36 weeks, 2 credits)*</p> <p>*Denotes the class has a prerequisite.</p> </td> <td style="width: 50%; vertical-align: top;"> <p>Grade 11 - 12 AP Physics: Newtonian Mechanics (18 weeks, 1 credit)* AP Physics: Electricity and Magnetism (18 weeks, 1 credit)* Forensic Science (18 weeks, 1 credit)* AP Biology (36 weeks, 2 credits)* AP Chemistry (36 weeks, 2 credits)*</p> </td> </tr> </table>				<p>Grade 10 – 12 Astronomy (9 weeks, .5 credit) Oceanography (9 weeks, .5 credit) AP Environmental Science (18 weeks, 1 credit)* Environmental Sustainability (18 weeks, 1 credit)</p> <p>Human Anatomy and Physiology (18 weeks, 1 credit)* Applied Human Anatomy & Physiology (18 weeks, 1 credit)* (CB West only) AP Chemistry (36 weeks, 2 credits)*</p> <p>*Denotes the class has a prerequisite.</p>	<p>Grade 11 - 12 AP Physics: Newtonian Mechanics (18 weeks, 1 credit)* AP Physics: Electricity and Magnetism (18 weeks, 1 credit)* Forensic Science (18 weeks, 1 credit)* AP Biology (36 weeks, 2 credits)* AP Chemistry (36 weeks, 2 credits)*</p>
<p>Grade 10 – 12 Astronomy (9 weeks, .5 credit) Oceanography (9 weeks, .5 credit) AP Environmental Science (18 weeks, 1 credit)* Environmental Sustainability (18 weeks, 1 credit)</p> <p>Human Anatomy and Physiology (18 weeks, 1 credit)* Applied Human Anatomy & Physiology (18 weeks, 1 credit)* (CB West only) AP Chemistry (36 weeks, 2 credits)*</p> <p>*Denotes the class has a prerequisite.</p>	<p>Grade 11 - 12 AP Physics: Newtonian Mechanics (18 weeks, 1 credit)* AP Physics: Electricity and Magnetism (18 weeks, 1 credit)* Forensic Science (18 weeks, 1 credit)* AP Biology (36 weeks, 2 credits)* AP Chemistry (36 weeks, 2 credits)*</p>				

Biology Courses

It is required that all Central Bucks students participate in a biology course.

3010 Honors Biology
(18 weeks, 1 credit)

Honors Biology meets the requirements for both 10th grade biology and college entrance.

Honors Biology is an in-depth exploration of life on the chemical and cellular levels. Honors Biology students will actively engage in the scientific practices through labs, simulations, scientific readings, and problem-based activities to explore the topics of cell physiology, genetics, cell energy, embryology, and biochemistry. The course requires a high level of reading and math computation skills, independence, and maturity. Honors Biology students will explore topics deeply and engage in challenging nonfiction texts from scientific journal articles and companion texts. Honors Biology is intended for students who have distinguished themselves in mathematics and science. **Honors weighted-grade course. Prerequisite: (3900) Honors Science 9, A- or better, or (3920) Academic Science 9, A, or teacher recommendation.**

3020 Academic Biology
(18 weeks, 1 credit)

Academic Biology meets the requirements for both 10th grade biology and college entrance.

Academic Biology is an exploration of life on the chemical and cellular levels. Academic Biology students will actively engage in the scientific practices through labs, simulations, scientific readings, and problem-based activities to explore the topics of cell physiology, genetics, cell energy, embryology, microbiology, and biochemistry. This course is intended for students wishing to meet college entrance requirements.

3040 Practical Biology
(18 weeks, 1 credit)

Practical Biology meets the requirements for both 10th grade biology and college entrance.

Practical Biology uses a problem-based approach to the biological sciences. In the first half of the course, topics such as cell function, genetics, and microbiology are studied. The second half of the course addresses questions and concerns about natural resources, ecosystems, conservation, and ecology. This course is designed for the student who would like a more general understanding of the biological world and to meet college entrance requirements.

3100 Advanced Placement Biology

(36 weeks, 2 credits)

Advanced Placement Biology is a one year, two-credit course designed in accordance with the PA standards for high school biology and the College Board curriculum for AP Biology. This is a rigorous course utilizing Advanced Placement approved college texts and laboratory experiences that mirrors the freshman Biology 101 and 102 experience at most colleges. Success in this level of biology requires a high level of motivation and interest in biology, excellent study skills, sophisticated problem-solving skills, and a commitment to working outside of the classroom. College credit or advanced standing may be obtained from many institutions for students who score 3 or higher on the Advanced Placement Test. Advanced Placement Biology meets the College Board requirements for AP Biology. Students planning to pursue careers in medicine, engineering, or other science fields should consider taking this course. **Students taking this course should plan to take the Advanced Placement Biology Test given in May and the PA Keystone Exam if they have not already earned a proficient score. AP weighted-grade course. While Honors Biology is not required the majority of students will benefit from its completion prior to Advanced Placement Biology. Prerequisite: (3900) Honors Grade 9 Science, A or better and teacher recommendation; (3010) Honors Biology, B or better and teacher recommendation; (3020) Academic Biology A- or better and teacher recommendation.**

3130 Human Anatomy and Physiology

(18 weeks, 1 credit)

The course of study focuses on body systems, such as the skeletal, muscular, cardiovascular, digestive, and nervous systems. A major theme of this course is to examine current issues, technologies, and bioethical questions relating to the curricular topics. Structured lab work, including dissection of specimens, is part of the course.

Human Anatomy and Physiology is designed for college-bound students with an interest in the allied health fields or students with a general interest in the biology of the human body. **Prerequisite: (3020) Academic Biology, C or better or (3010) Honors Biology, C or better.**

3122 Applied Human Anatomy and Physiology

CB-West only

(18 weeks, 1 credit)

This course links biology and physical education to provide students with the opportunity to learn about human anatomy and physiology. The concepts and principles are then applied in a student-designed total “wellness” program. A wellness program includes fitness training, nutrition, and stress management.

The class meets every day for one block. Activities include the use of the YMCA as a fitness center, cholesterol screening, student-designed fitness programs, an exhibition of mastery, and dissection labs involving preserved specimens. Active participation is required for all activities. **Prerequisite: (3040) Practical Biology, C or better or (3020) Academic Biology, C or better or (3010) Honors Biology, C or better.**

Chemistry Courses

It is recommended that all college-bound Central Bucks students participate in a chemistry course.

3110 Honors Chemistry

(18 weeks, 1 credit)

Honors Chemistry offers a study of the relationship between matter and energy and the role that each plays in physical and chemical change. Students will learn the scientific methods of problem solving and will be expected to apply them in laboratory work. Students will learn to use laboratory equipment safely and correctly and will learn to record and interpret data from experiments. Laboratory work and assessments will challenge students to be creative and to give evidence of individual study.

Honors Chemistry is intended for students who have distinguished themselves in mathematics and science. The course prepares students to meet course expectations for advanced-level courses such as AP Biology, AP Chemistry, or AP Physics. For this reason, students are expected to be working above grade level in mathematics. Students planning to pursue careers in medicine, engineering, or other science fields should consider taking this course. **Honors weighted-grade course. Prerequisite: Algebra 2/Trigonometry, B or better. (Note: Algebra 2/Trigonometry course may be taken concurrently with Honors Chemistry)**

3120 Academic Chemistry

(18 weeks, 1 credit)

Academic Chemistry offers a study of the relationship between matter and energy and the role that each plays in physical and chemical change. Students will learn the scientific methods of problem solving and will be expected to apply them in laboratory work. Students will learn to use laboratory equipment safely and correctly and will learn to record and interpret data from experiments. To be successful in Academic Chemistry, students must exhibit strong study skills and daily commitment to course activities.

Academic Chemistry is designed for students who have demonstrated proficiency in mathematics, including satisfactory completion of Geometry/Trig. This course meets college entrance requirements. **Prerequisite: Geometry/Trig, C or better.**

3140 Conceptual Chemistry

(18 weeks, 1 credit)

Conceptual Chemistry offers students the opportunity to study topics related to the general structure and behavior of matter. Essential chemistry content is presented within the context of realistic situations and is related to the student’s practical experiences.

All units will involve laboratory investigations. The course will help students understand industrial applications of chemistry and how chemistry is used to solve societal problems. Success in the course requires daily, active participation. Although this course meets college entrance requirements, it is recommended that the college-bound student takes Academic Chemistry.

3101 Advanced Placement Chemistry

(36 weeks, 2 credits)

Advanced Placement Chemistry is a one year, two-credit course designed in accordance with the PA standards for high school chemistry and the College Board curriculum for AP Chemistry. This is a rigorous course utilizing Advanced Placement approved college texts and laboratory experiences that mirrors the freshman Chemistry 101 and 102 experience at most colleges. Success in this level of chemistry requires a high level of motivation and interest in chemistry, excellent study skills, sophisticated problem-solving skills, and a commitment to working outside of the classroom. Further, AP Chemistry is suited for students who have distinguished themselves in mathematics, including satisfactory completion of Algebra 2/Trigonometry, and science. College credit or advanced standing may be obtained from many institutions for students who score 3 or higher on the Advanced Placement Test. Advanced Placement Chemistry meets the College Board requirements for AP Chemistry. Students planning to pursue careers in medicine, engineering, or other science fields should consider taking this course. **Students taking this course should plan to take the Advanced Placement Chemistry Test given in May. AP weighted-grade course. While Honors Chemistry is not required the majority of students will benefit from its completion prior to Advanced Placement Chemistry. Prerequisite: (2530) Honors Algebra 2/Trigonometry, B or better, and teacher recommendation (2520) Algebra 2/Trigonometry, A- or better and teacher recommendation. (3900) Honors Grade 9 Science, A or better and teacher recommendation; (3110) Honors Chemistry, B or better and teacher recommendation; (3120) Academic Chemistry A- or better and teacher recommendation.**

3101B – Advanced Placement Chemistry Partnership Program

(36 weeks, 2 credits)

The Advanced Placement Chemistry Partnership Program is a full year program that combines the Advanced Placement Chemistry curriculum with an after-school internship and independent research project at the Pennsylvania Biotechnology Center. Students electing to apply for the program are expected to exhibit a professional work ethic, have the capacity to work independently in a lab setting, and provide their own transportation home from the center. Further, if selected for this program students may complete assignments in laboratories operated by the *Hepatitis B Foundation* and *Baruch S. Blumberg Institute*. Therefore, this program is open to students who meet the following criteria based on the institutions' applicable rules and regulations: are 16 years of age on or before the first day of class, provide proof of completing the Hepatitis B vaccine series or begin the vaccination before starting in the laboratory, and complete the Pennsylvania Biotechnology Center's Good Laboratory Practices training protocol.

This is an application only course. Interested students should register for **3101 Advanced Placement Chemistry** and complete the application process. **Students taking this course should plan to take the Advanced Placement Chemistry Test given in May. AP weighted grade course. Prerequisite: (2530) Honors Algebra 2/Trigonometry, B or better; (2520) Algebra 2/Trigonometry, A- or better and teacher recommendation. While Honors Chemistry is not required many students will benefit from its completion prior to Advanced Placement Chemistry. Application Only.**

3201 – Biotechnology Research Practicum

(36 weeks, 2 credits)

The Biotechnology Research Practicum is a full year program offered to students who have completed the Advanced Placement Chemistry Partnership Program. Students will continue their internship and independent research while mentoring Central Bucks students through their first year of research. This is an application only course. Interested students should complete the application process. **Prerequisite: Successful completion of the Advanced Placement Chemistry Partnership Program. Pass / Fail course. Invitation Only.**

Physics Courses

It is recommended that all college-bound Central Bucks students participate in a physics course.

3224 Academic Physics

(18 weeks, 1 credit)

Why is the sky blue? Have you ever wondered how the world works? If so, then Academic Physics is the course for you. Students will learn some of the most foundational concepts in all of the sciences: motion, forces, energy, electricity & magnetism, wave motion, and the behavior of light. Classroom instruction will emphasize hands-on learning. Students will have the opportunity to apply basic mathematical techniques to real-world situations. Students will learn the scientific method of problem-solving and learn to apply it successfully through laboratory experimentation. It is recommended that all college-bound Central Bucks students participate in a physics course. **Prerequisite: Geometry/Trig, C or better.**

3225 Honors Physics

(18 weeks, 1 credit)

Honors Physics is the study of motion, forces, energy & momentum. Experimentation, demonstrations, problem-solving and associated readings are all part of the course. Students will learn the scientific method of problem-solving and learn to apply it successfully in the laboratory.

Honors Physics is intended for students who have distinguished themselves in mathematics and science. It is a particularly math-intensive course; and consequently, students are expected to be working above grade-level in mathematics. Students planning to pursue careers in medicine, engineering, or other science fields should take this course. **Honors weighted-grade course. Prerequisite: Algebra 2/Trigonometry, C or better or teacher recommendation.**

3102 Advanced Placement Physics: Newtonian Mechanics

(18 weeks, 1 credit)

This AP course is designed to address the areas of kinematics, Newton's laws of motion, energy and power, systems of particles, circular motion and rotation, oscillations, and gravitation. This is a typical first-semester college physics course taken by students majoring in science, math, or engineering. High motivation and an above-average ability in math are important because the course will move at a fast pace and is calculus based. **Students taking this course should plan to take the Advanced Placement Physics: Newtonian Mechanics Test given in May. AP weighted-grade course. Prerequisite: Pre-Calculus, B- or better or teacher recommendation.**

3103 Advanced Placement Physics: Electricity & Magnetism

(18 weeks, 1 credit)

This AP course addresses the following content areas: electrostatics, electric circuits, magnetostatics, electromagnetism, and conductors, capacitors, and dielectrics. Use of calculus in problem solving and in derivations will increase as the course progresses. This is a typical second-semester college physics course. **Students taking this course should plan to take the Advanced Placement Physics: Electricity and Magnetism Test given in May. AP weighted-grade course. Prerequisite: AP Newtonian Mechanics or Honors Physics, A- or better, and Calculus 1**

Earth and Space Science Courses

3640 Astronomy/Space Exploration

(9 weeks, .5 credit)

The astronomy course provides a descriptive study of the universe and the place that our solar system occupies within the universe. The motion of our solar system and the instruments used to study our galaxy are explored, along with travel, work, and exploration in space.

3643 Oceanography

(9 weeks, .5 credit)

Oceanography is for students interested in the ocean and its effects on man and nature. Recent concern about ocean pollution has increased the need for basic understanding of the sea environment. Students will learn about the physical features of the oceans, chemical makeup, tides, currents, topography of the sea floor, and shorelines. The biological requirements of the ocean community will also be studied.

Environmental Science Courses

3118 Environmental Sustainability

(18 weeks, 1 credit)

Environmental Sustainability is a project-based course that provides students with opportunities to investigate real world environmental issues. The course will examine an array of ecological, biological, agricultural, technological, economic, social, and political issues associated with our environment today. Students will describe environmental issues in view of their complex and dynamic nature, identify their role in and responsibility to the issue, and explore reasonable solutions to diminish or resolve the issue, both locally and globally. In the end, students will understand the ways social, economic and environmental systems interact, appreciate and respect the diversity of views and values that influence sustainable ways of living, and participate critically and act creatively in determining more sustainable ways of living. This course is designed for a broad range of students with a high interest in making informed choices about their life, family, and community, and being better stewards of Earth's resources.

3108 Advanced Placement Environmental Science

(18 weeks, 1 credit)

The goal of AP Environmental Science is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze both natural and human-made environmental problems, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them.

The course focuses on the "real science" behind environmental problems and issues. Laboratory and field study are important elements of the course. Topics include scientific analysis, interdependence of the Earth's systems, human population dynamics, renewable and nonrenewable resources, environmental quality, and the environment and society.

Because of the quantitative analysis that is required in the course, students should also have taken at least one year of Algebra. **Students taking this course should plan to take the Advanced Placement Environmental Science Test given in May. AP weighted-grade course. Prerequisite: Completion of one of the following: (3020) Academic Biology, (3010) Honors Biology, (3120) Academic Chemistry, or (3110) Honors Chemistry.**

3213 Forensic Science

(18 weeks, 1 credit)

The course will involve the application of chemical, physical, and biological principles for the investigation of physical evidence in criminal cases. It will entail analytical reasoning, laboratory testing, possible field trips, and provide technical expertise (qualified speakers who will present and help us to analyze evidence from criminal cases).

Students will be taught the fundamentals of a criminal investigation and how they apply in a court of law. The students will learn by doing — they will isolate and process crime scenes, analyze and interpret lab data, and problem solve. Each student's experience will culminate with the solving of a crime scene scenario. **Grade Level: 11, 12. Prerequisites: (3020) Academic Biology, C or higher or (3010) Honors Biology, C or higher**

SOCIAL STUDIES, INCLUDING HISTORY AND THE SOCIAL SCIENCES

The study of history rests on knowledge of facts, dates, names, places, events, and ideas. However, true historical understanding requires students to engage in historical thinking: to raise questions and to collect solid evidence in support of their answers; to go beyond the facts presented in their textbooks and examine the historical record for themselves; to consult documents, journals, diaries, artifacts, historic sites, works of art, quantitative data, and other evidence from the past, and to do so imaginatively—taking into account the historical context in which these records were created and comparing the multiple points of view of those on the scene at the time (*National Historical Thinking Standards*). The study of history provides an ordered account of the past and its significance to us.

Sophomores will examine the “modern” world from 1450 C.E. to the present. Juniors will study the importance of civics and examine our American government and its involvement in the US economy. Seniors will focus on how international relations and economics affect our globalized contemporary world. These sequences represent typical pathways through high school social studies classes. If you have any questions, your current social studies teacher or guidance counselor will be able to answer them for you.

All students are required to complete four credits of social studies for graduation. Any AP course with 1.5 credits will have 1.0 credits assigned to graduation requirements for social studies credit and .5 credit assigned to electives.

SOCIAL STUDIES SEQUENCES			
Grade 9	Grade 10	Grade 11	Grade 12
MOST RIGOROUS PROGRAM			
For college-bound students who are applying to colleges designated as most competitive and/or planning to major in history, business, social sciences, or humanities.			
Honors United States History	AP European History	AP US History AP Macroeconomics, AP Microeconomics, AP Comparative Government, AP Psychology	AP Macroeconomics, AP Microeconomics, AP Comparative Government, AP Psychology
HONORS & ACADEMIC PROGRAM			
For the majority of college-bound students			
Academic United States History	Modern World History Honors OR Modern World History Academic	American Government and Economic Systems Honors OR American Government and Economic Systems Academic	Global Relations Honors OR Global Relations Academic

[1101 Advanced Placement European History](#)

(27 weeks, 1.5 credits)—Grade 10

This course investigates the development of Western European society between 1450 and the present. The students will become familiar with the principal themes in modern European history and the methods for the analysis of historical evidence. **Students who take this course should plan to take the Advanced Placement European History Test given in May. AP weighted-grade course. Prerequisites: B or better in 9th Honors United States History, or A- or better in 9th Academic United States History, or teacher recommendation.**

[1111 Honors Modern World History](#)

[1120 Academic Modern World History](#)

(18 weeks, 1 credit)—Grade 10

This course will concentrate on the history of the modern world, both Western and non-Western, from 1450 CE to the present. Topics will include foreign policy, political systems, social and cultural change, and economic trends. The honors course addresses the same time period and topics but, in more depth, with added readings, writing assignments, and projects. **Honors weighted grade for 1111 Honors prerequisite: Teacher recommendation.**

[1000 Advanced Placement U.S. History](#)

(27 weeks, 1.5 credits)—Grade 11

This course examines the history of the United States in a chronological manner from the Colonial Period through the 1990s. Students complete readings in both factual and interpretive textbooks. Class participants will address more historical material, study history in greater depth, and complete projects and writing assignments other than those assigned in Recent America, Honors or Academic. **Students who take this course should plan to take the Advanced Placement U.S. History Test given in May. AP weighted-grade course. Prerequisites: B or better in 10th Honors Social Studies, or A in 10th Academic Social Studies, or B or better in AP European History, or teacher recommendation.**

[1012 Honors American Government and Economic Systems](#)

[1022 Academic American Government and Economic Systems](#)

(18 weeks, 1 credit)—Grade 11

This course examines the organization and operations of the political system in the United States. Topics will focus on how the government affects our policies, economies, and social issues while also examining the three branches of our national government, the role of political parties and interest groups, and elections. Economics will

introduce such fundamental economic concepts as scarcity, opportunity costs, supply and demand, competition and incentives, fiscal and monetary policy, forms of business organization, the business cycle, and the economic role of government.

The honors course addresses the same topics but in more depth with added readings, writing assignments, and projects. **Honors weighted grade for 1012. Honors prerequisite: Teacher recommendation.**

[1203 Advanced Placement Comparative Government](#)

(18 weeks, 1 credit)—Grade 11, 12

This course will focus on the historical and contemporary development of governmental, political, and social systems in Great Britain, France, Russia, China, and other less developed nations. **Students who take this course should plan to take the AP Comparative Government test in May. AP weighted-grade course. Prerequisites: B or better in AP European History or AP U.S. History or A- or better in 10th or 11th grade social studies course or teacher recommendation.**

[1210 Honors Global Relations](#)

[1220 Academic Global Relations](#)

(18 weeks, 1 credit)—Grade 12

Students in this course will study how countries relate to one another, how they work together, and how they sometimes conflict in our world today. A major focus of the course is the impact of international issues on the formulation of American foreign policy. Comparative economic systems and international trade in the evolving global economy will also be considered. The central skill of economics is decision-making; emphasis will be placed on the development of an economic perspective to problem-solving so students can better understand current economic issues such as inflation, unemployment, stagflation, productivity, and the national debt.

The honors course addresses the same topics but in more depth with added readings, writing assignments, and projects. **Honors weighted grade for 1210. Honors prerequisite: Teacher recommendation.**

[1201 Advanced Placement Microeconomics](#)

(18 weeks, 1 credit)—Grade 11, 12

This is an introductory college-level course that focuses on the principles of economics that apply to the functions of individual economic decision-makers. The course also develops students' familiarity with the operation of product and factor markets, distributions of income, market failure, and the role of government in promoting greater efficiency and equity in the economy. Students learn to use graphs, charts, and data to analyze, describe, and explain economic concepts. **Students who take this course should plan to take the AP Microeconomics test in May. AP weighted-grade course. Prerequisites: B or better in AP European History or AP U.S. History or A- or better in previous social studies course or teacher recommendation.**

[1202 Advanced Placement Macroeconomics](#)

(18 weeks, 1 credit)—Grade 11, 12

AP Macroeconomics is an introductory college-level course that focuses on the principles that apply to an economic system as a whole. The course places particular emphasis on the study of national income and price-level determination; it also develops students' familiarity with economic performance measures, the financial sector, stabilization policies, economic growth, and international economics. Students learn to use graphs, charts, and data to analyze, describe, and explain economic concepts. **Students who take this course should plan to take the AP Macroeconomics test in May. AP weighted-grade course. Prerequisites: B or better in AP European History or AP U.S. History or A- or better in previous social studies course or teacher recommendation.**

[1300 Advanced Placement Psychology](#)

Grades 10,11,12 (*This is an Elective but can replace the 12th Grade Social Studies Required Credit for 12th Graders Only)

(18 for a semester or 36 weeks (A/B schedule-all year), 1 credit)

The Advanced Placement Psychology course is designed to introduce **mature** students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the ethics and methods psychologists use in their science and practice.

The Advanced Placement Psychology course will offer students the opportunities to learn about the explorations and discoveries made by psychologists over the past century. Students will get the chance to assess some of the differing approaches adopted by psychologists, including biological, behavioral, cognitive, humanistic, psychodynamic, and sociocultural perspectives. Students will also learn the basic skills of psychology research and develop critical thinking skills. ***Parents and students should be aware that some material may be controversial. Students who take this course should plan to take the AP Psychology test in May. AP weighted-grade course. Prerequisites: A- or better in 9th Grade Social Studies or teacher recommendation.**

Social Studies Elective Courses

These courses provide graduation credits in electives. **Social Studies elective courses are only offered if there is sufficient enrollment.**

[1160 Psychology](#)

Grades 10, 11, 12

(9 weeks, .5 credit)

This course introduces students to the factors affecting human behavior and the ideas of the more prominent psychologists. Stages of human development, learning, perception, personality, and the psychological basis of behavior are among the topics investigated. Through readings, discussion, viewing, and experimentation, students achieve a better understanding of human behavior.

[1161 Sociology](#)

Grades 10, 11, 12

(9 weeks, .5 credit)

Sociology will enable students to better understand the relationships and influences of social groups upon the individual. The socialization process, social stratification, deviance, social institutions, and cultural change are among the topics explored. A variety of sociological perspectives will be applied throughout this course in order to enable students to analyze social behavior.

[1162 Introduction to the Law](#)

Grades 10, 11, 12

(9 weeks, .5 credit)

What are my legal rights and responsibilities as a citizen in the United States, as a juvenile, or as an adult in society? What legal structures and procedures govern and protect me? Introduction to the Law is designed to help students answer these questions by conducting a thorough examination of the political and legal ideals and practices of this country.

[1163 Geography](#)

Grades 10, 11, 12

(9 weeks, .5 credit)

This course introduces students to physical, human, and cultural geography. Students will study the physical characteristics of the earth and the tools of geographers. Through case studies and projects, students will answer questions such as: How does geography help us understand our world? In what ways do humans interact with their environment? How can cultural characteristics link or divide regions?

TECHNOLOGY & ENGINEERING EDUCATION

All courses in technology and engineering education are offered only if there is sufficient enrollment.

[6360 Exploratory Architectural Design](#)

Offered at CB East

(9 weeks, .5 credit)

This course is for those students wishing to investigate their interest in architecture. Students will gain hands-on experience as they develop a residential design and gain exposure to computer-aided design using AutoDesk, 3-D modeling software and Vector Programs. Model building and portfolio development are also elements of the course. **Students completing this course should next enroll in Architectural Design 2.**

[6361 Architectural Design 1](#)

Offered at CB East

(18 weeks, 1 credit)

This course is highly recommended for those students interested in pursuing architecture upon graduation, those wishing to explore the various careers in architecture, and those with an interest in residential home layout. During this course, students will study basic structural planning, design, and construction. Class time will be devoted to creating a residential design study and constructing a model of it. Students will utilize computer-aided design (CAD) using AutoDesk, 3-D modeling software and Vector Programs. Students will make

use of digital photography and desktop publishing as they begin building their architectural design portfolio.

[6362 Architectural Design 2](#)

Offered at CB East

(18 weeks, 1 credit)

This course allows students to explore their interest in Architecture in greater detail. Students will complete a commercial design study utilizing computer-aided design as well as the drawing board using AutoDesk, 3-D modeling software and Vector Programs. Emphasis is placed on three dimensional conceptualizations, site development, model building, and time management skills. Level one portfolios will be built upon with college admissions in mind. **Prerequisite: Completion of Architectural Design 1 or Exploratory Architectural Design with a final grade of C- or better, or approval of teacher.**

[6363 Architectural Design 3](#)

Offered at CB East

(18 weeks, 1 credit)

Students will complete advanced architectural design problems utilizing computer-aided design as well as traditional methods. Emphasis is placed on three-dimensional conceptualization, elements of design, architectural history, color in design, computer generated 3D rendering, advanced model building, and time management skills using AutoDesk, 3-D modeling software and Vector Programs. Previous level portfolios will be built upon with college admissions in mind. **Prerequisite: Completion of Architectural Design 2 with a final grade of C- or better, or approval of teacher.**

[6560 Exploring Engineering and Architecture](#)

Offered at CB South and CB West

(9 weeks, .5 credit)

This 9-week course is for those students wishing to investigate their interest in Engineering and Architecture. In this course, students will be introduced to the engineering design process and use it to solve problems related to engineering and architecture. Class time will be devoted to CAD (computer-aided design), vinyl cutting, 3D modeling software, robotics, coding and electronics. Students will use a variety of techniques and real-world technologies throughout the course. Students completing this course should next enroll in Engineering and Architecture 2 with a final grade of C- or better, or approval of teacher.

[6561 Engineering and Architecture 1](#)

Offered at CB South and CB West

(18 weeks, 1 credit)

This 18-week course is highly recommended for students interested in pursuing engineering or architecture upon graduation. In this course, students will be introduced to the engineering design process and use it to solve problems related to engineering and architecture. Class time will be devoted to CAD (computer-aided design), vinyl cutting, and 3D modeling software, robotics, coding and electronics. Students will use a variety of techniques and real-world technologies throughout the course. Students will begin portfolios of their work.

[6562 Engineering and Architecture 2](#)

Offered at CB South and CB West

(18 weeks, 1 credit)

Building upon the experiences and knowledge in Engineering and Architecture 1, students will expand their knowledge in CAD (computer aided design), vinyl cutting, 3D modeling software, robotics, coding, and electronics. Students will work with CNC programming, laser engraving and the programming of microcontrollers. Emphasis is placed on three-dimensional conceptualization, elements of design and applications of technology through engineering. Students will continue to develop portfolios of their work. **Prerequisite: Completion of Engineering and Architecture 1 or Exploratory Engineering and Architecture with a final grade of C- or better, or approval of teacher.**

[6563 Engineering and Architecture 3](#)

Offered at CB South and CB West

(18 weeks, 1 credit)

Building upon the experiences and knowledge in Engineering and Architecture 2, students will select advanced engineering and architectural design problems which they will solve based upon their college and career goals. Computer aided design, vinyl cutting, 3-D modeling software, robotics, coding, electronics and open source programming will be used for accomplishing design challenges. Students will finalize portfolios of their work. **Prerequisite: Completion of Engineering and Architecture 2 with a final grade of C- or better, or approval of teacher.**

[6460 Exploratory Materials Engineering](#)

Offered at CB South and CB West

(9 weeks, .5 credit)

In this course, students will explore the software employed by the manufacturing industry to operate a variety of machines, including a laser and CNC equipment. Students will explore graphic design and layout as they design and produce their own mantel clock and/or folding stool. In addition to the computer-controlled machinery, Exploratory Materials Processing provides students with the opportunity to interact with traditional machines. **A fee will be charged for materials used in projects kept by the student. Students completing this course should next enroll in Materials Processing and Design 2 with a final grade of C- or better, or approval of teacher.**

[6461 Materials Engineering 1](#)

Offered at CB South and CB West

(18 weeks, 1 credit)

In this course, students will use the same software employed in the manufacturing industry to program a variety of machines. Students will explore graphic design and layout as they design and produce their own mantel clock, folding stool, and other projects.

In addition to offering experience with computer-controlled machinery, Materials Processing and Design 1 also provide students with the opportunity to interact with traditional machines as they produce other projects. Students will use problem-solving skills throughout the course. Digital imaging and desktop publishing techniques are used as students develop an advertisement for one of

the products they design and produce. **A fee will be charged for materials used in projects kept by the student.**

[6462 Materials Engineering 2](#)

Offered at CB South and CB West

(18 weeks, 1 credit)

Building upon experiences in the level 1 course, students in Materials Engineering 2 will engage in a variety of activities. Students will have the opportunity to select their own product as they investigate advanced machining. **A fee will be charged for materials used in projects kept by the student. Prerequisite: Materials Engineering 1 or Exploratory Engineering, C- or better, or approval of teacher.**

[6463 Materials Engineering 3](#)

Offered at CB South and CB West

(18 weeks, 1 credit)

This course builds upon the CNC and machining concepts, and handrafter projects from Materials Engineering 2. Students will work with contoured surfaces as they explore the level 3, 3-D capabilities of the software. Students will independently apply all concepts covered. Digital imaging and desktop publishing techniques are used as students continue to maintain a project portfolio. Additionally, students will be exposed to STEAM (Science, Technology, Art, Engineering and Mathematics) concepts as they apply to creating an electric guitar, as well as given an opportunity to create their own electric guitar in the process. **A fee will be charged for materials used in projects kept by the student. Prerequisite: Materials Engineering 2, C- or better, or approval of teacher.**

[6721 Engineering 1](#)

Offered at CB East

(18 weeks, 1 credit)

This course is only available at East. In this course, students will be introduced to concepts found in the various fields of engineering. Students will be exposed to the engineering design process and then use it to solve problems related to basic engineering concepts. In addition to using computer numerical controlled machines, robotics, and a laser engraver, students will be introduced to high level 3-dimensional design software and expected to use a variety of techniques and real-world technologies throughout the course.

[6722 Engineering 2](#)

Offered at CB East

(18 weeks, 1 credit)

This course is only available at East. Building upon the experiences and knowledge garnered in Engineering 1, students will engage in a more elaborate study of robotics and electronics. Students will explore robotics by designing small robots that can navigate an obstacle course and complete several functions. Control logic and robot components will be introduced in this section of the course. Students will further their exploration of robotics using a more advanced system of engineering and design; additionally, students will read and develop schematics and create their own robots. Students will also continue to explore computer numerical control by designing and building a prototype in a product design challenge using the CNC equipment. Additionally, students will be exposed to STEAM (Science, Technology, Art, Engineering and Mathematics) concepts as they apply to creating an electric guitar. **Prerequisite: Engineering 1, C or better, or approval of teacher.**

WORLD LANGUAGES

World Language courses are offered only if there is sufficient enrollment.

All students are encouraged to take more than one language if their schedule allows for this opportunity.

*Note that French 1 is only offered in 8th grade

**At any point in high school, students may add Chinese or Latin

World Language Quick Guide to Suggested Course Sequences				
Grade 8	Grade 9	Grade 10	Grade 11	Grade 12
French 1	French 2	French 3 Honors	French 4 Honors	AP French
French 1	French 2	French 3	French 4	Add Latin, Chinese or Spanish
		Latin 1	Latin 2	Latin 3
		Chinese 1	Chinese 2	Chinese 3
		Spanish 1	Spanish 2	Spanish 3
	Spanish 1	Spanish 2	Spanish 3	Spanish 4
	Spanish 1	Spanish 2	Spanish 3/4 in 1 year	Spanish 5/AP in 1 year
Spanish 1	Spanish 2	Spanish 3	Spanish 4	Spanish 5
Spanish 1	Spanish 2	Spanish 3	Spanish 4/5 in 1 year	AP Spanish
Spanish 1	Spanish 2	Spanish 3 Honors	Spanish 4 Honors	AP Spanish

[4101 Chinese 1](#)

(18 weeks, 1 credit)

The goal of this first-year Mandarin course is to enable students to use fundamental expressions and vocabulary in oral and written context while integrating cultural elements. This course will focus on tones, rules of phonetic spelling, and pronunciation. Students will also learn Chinese characters: stroke order, structure, the writing systems, and calligraphic techniques (simplified characters will be taught). Students will learn basic sentence pattern analysis, and development of language skills in listening, speaking, reading, and writing.

[4102 Chinese 2](#)

(18 weeks, 1 credit)

The goal of the Chinese 2 Mandarin course is to enable students to communicate effectively in the target language, to read, write, interpret and speak basic Chinese. Students will continue to use fundamental expressions and vocabulary in oral and written context while integrating cultural elements. This course will also continue the focus on tones, rules of phonetic spelling, and pronunciation. Upon completion of this course, students will be able to express their basic thoughts and ideas in writing and speaking. Students registering for this course must have a solid foundation in tones and pronunciation, as well as a working knowledge of basic vocabulary (i.e. greetings, simple sentences). **Prerequisite: Chinese 1, C or better.**

[4103 Chinese 3](#)

(18 weeks, 1 credit)

Students enrolled in Level 3 will begin the course proficient in basic Mandarin. The same text series and supplemental materials are used and the students continue practicing reading, writing, speaking and listening as they become more proficient in the language. **Prerequisite: Level 2, C- or better**

[4501 Spanish 1](#)

(18 weeks, 1 credit)

The goal of first-year language is to enable students to use fundamental expressions and vocabulary in verbal and written context while integrating cultural elements. This course emphasizes communicative skills, relevant grammar concepts, and reading comprehension. Online resources and a variety of supplementary materials are used to help achieve this goal. **Prerequisite: The department recommends a C or better in the previous year's English course.**

[4502 Spanish 2](#)

(18 weeks, 1 credit)

Level 2 continues language study in the same patterns as Level 1. Students experience opportunities for more advanced verbal and written self-expression and related cultural elements. More advanced grammatical concepts, vocabulary, and expressions are taught in complete sentences with an emphasis on speaking and writing. Online resources and supplementary materials are essential parts of these courses. **Prerequisite: Level 1, C- or better.**

[4203 French 3](#)

[4503 Spanish 3](#)

(18 weeks, 1 credit)

These courses continue earlier study with an increasing emphasis on speaking, reading and writing. Students will review all previously studied concepts and be introduced to more advanced grammatical points. Culture is integrated throughout the curriculum. Online resources and supplementary materials are essential parts of these courses. **Prerequisite: Level 2, C- or better.**

[4213 French 3, Honors](#)

[4513 Spanish 3, Honors](#)

(18 weeks, 1 credit)

This is a rigorous course designed to accelerate the student's proficiency and achievement in the skills of listening, speaking, reading,

and writing. In-depth writing, advanced reading, speaking and listening will prepare students for the AP course. Reading will include literary works by well-known authors with literary analysis. Detailed grammatical concepts, an increased amount of detailed vocabulary and the use of the AP rubrics will be key components of the course. The students recommended for this course should strongly consider taking level 4, Honors, followed by AP Language. **French 3 Honors is an honors weighted-grade course. Prerequisite: Level 2, A average and the recommendation of the French 2 teacher. Spanish 3 Honors is an honors weighted-grade course. Prerequisite: Level 2, B+ average and the recommendation of the Spanish 2 teacher.**

[4204 French 4](#)

[4504 Spanish 4](#)

(18 weeks, 1 credit)

These courses continue emphasis on listening, speaking, reading, culture and writing. Students will review previously studied grammatical points and be introduced to more advanced grammatical concepts. Selected readings and culture are infused throughout the curriculum. Online resources, workbooks, and supplementary materials are an essential part of these courses. **Prerequisite: Level 3, C- or better.**

[4514 Spanish 4, Honors](#)

(18 weeks, 1 credit)

This course, which is a continuation of the Honors 3 sequence, is designed to accelerate the student's proficiency and achievement in the skills of listening, speaking, reading, and writing. Continued emphasis will be placed on reading and writing skills. Reading will include literary works by well-known authors with literary analysis. Students will complete the study of grammatical concepts and their applications. Increased emphasis will be placed on verbal and aural discrimination. A thematic based text is used as a primary resource. The students recommended for this course should strongly consider taking AP Spanish Language as the culmination of the sequence. **Honors weighted-grade course. Prerequisite: Level 3, Honors, B average and the recommendation of the Spanish 3 Honors teacher. Level 3 students may take Spanish 4 Honors only with teacher recommendation.**

[4214 French 4, Honors](#)

(18 weeks, 1 credit)

This rigorous course is designed to accelerate the student's proficiency and achievement in the skills of listening, speaking, reading, and writing. Emphasis will be placed on reading and writing skills. Readings will include literary works by well-known authors with literary analysis. Students will complete the study of grammatical concepts and their applications. Increased emphasis will be placed on verbal and aural discrimination. The student electing this course should strongly consider taking the AP Language course the following year as the culmination of the sequence. **Honors weighted-grade course. Prerequisite: Level 3, B average and recommendation of French 3 teacher.**

[4505 Spanish 5](#)

(18 weeks, 1 credit)

This course allows students to apply all the skills they have learned in their previous years of study. The practical aspects of using the foreign language will be emphasized and expanded. Student involvement in class activities plays a major part in the course. Students will learn historical and cultural information about Spain and the Americas in Spanish. Compositions, conversations, projects and debates in Spanish are an integral part of this course. Grammar will be thoroughly reviewed but will not be the main focus of the class.

Fifth year foreign language does not prepare students for Advanced Placement examinations. Academic-level students may take AP Language courses after completing level 5 with an A- average or better. **Prerequisite: Level 4, C- or better.**

[4500 Advanced Placement Spanish](#)

[4200 Advanced Placement French](#)

(18 weeks, 1 credit)

Advanced Placement Language is designed to prepare students for the AP Examination. Acceptable scores on this annual exam can result in college credit and/or advanced placement status at many of the nation's colleges.

In AP Language, students will continue to strengthen their proficiency in all four language skills: listening, speaking, reading, and writing. Students will integrate these skills and concepts using authentic resources, as well as literary works. Advanced grammatical concepts continue to be introduced and refined. Students will become proficient in audio recording.

Students selecting this course should plan to take the Advanced Placement Language Examination given in May. AP weighted-grade course. Prerequisite: AP Spanish: Level 4 Honors, B or better; Level 5, B or better. AP French: Level 4 with teacher recommendation; Level 4 Honors, C or better or teacher recommendation

[4401 Latin 1](#)

(18 weeks, 1 credit)

Latin 1 emphasizes the skills needed to read, comprehend, and translate the language while practicing grammar usage, vocabulary, with written and verbal work. In addition, emphasis is placed on Latin-English word derivations, mythology, Roman life and cultural influences, with special attention given to the city of Pompeii and its subsequent destruction.

[4402 Latin 2](#)

(18 weeks, 1 credit)

Latin 2 builds upon the foundation of Latin 1. Advanced grammatical concepts and vocabulary allow the student to continue reading, comprehending, and translating Latin passages. These passages, filled with cultural content, begin with Roman Britain and the city of Alexandria, and explore the arts and sciences of the regions, including travel and communication. Special focus continues to be given to Latin-English word derivations. **Prerequisite: Latin 1, C- or better.**

4403 Latin 3

(18 weeks, 1 credit)

Latin 3 continues the work of Latin 2, by using new and advanced grammatical concepts, more subject-specific vocabulary, and figures of speech. Roman life and culture will be emphasized while exploring Roman religion, entertainment, architecture, and military camps of various Roman colonies. Special emphasis continues to be given to Latin-English word derivation. **Prerequisite: Latin 2, C- or better.**

4522 Study Abroad: France (Summer of 2022)

4521 Study Abroad: Spain (Summer of 2021)

(.25 elective credit)

Study Abroad courses are designed to provide the student with an immersion experience and the opportunity to use a world language in an authentic culture where the target language is spoken. Participants will experience the art, music, history and customs of the country as well as carry out tasks to improve their oral proficiency. Each study abroad course contains five elements; pre-travel sessions (attendance at these sessions is mandatory), project, classwork abroad, travel, and reflection.

While abroad, students must adhere to all school board policies, including those regarding drugs, alcohol and weapons. An application form is available in each school through the World Languages Department. The cost of the course will vary from year to year and is the sole financial responsibility of parents or guardians.

Enrollment is limited. Travel for these courses will occur in the summer, rotating between languages. Travel is dependent upon world conditions, travel alerts, student enrollment and chaperone availability. **Prerequisites: Teacher recommendations, essay, application. Students must have completed Spanish 2 (Spain) or French 2 (France) with a grade of C or better prior to departure; they must also be enrolled in the next level of the sequence.**

YEARBOOK

9568 Yearbook Production—CB South/CB West

9569 Yearbook Production—CB East

(9 weeks, .5 elective credit)—CB East

(18 weeks, 1.0 elective credit)—CB South/CB West

This course is designed to provide yearbook staff with instruction in the various phases of yearbook production: yearbook journalism, layout and design, digital imaging, business management, advertising, and public relations. Students in this course design and produce the school's yearbook. **Note: A student may be on the yearbook staff without being enrolled in this course. Students may enroll in this course more than once only with prior permission from the teacher. Prerequisites: Grade B or better in English, and experience in at least one of these areas: photography, digital imaging, or business, or recommendation of the teacher/yearbook advisor.**



Central Bucks Mission Statement

The Central Bucks Schools will provide all students with the academic and problem-solving skills essential for personal development, responsible citizenship, and life-long learning.

Statement of Equal Opportunity

Central Bucks School District is an equal-opportunity institution which does not discriminate on the basis of race, religion, color, sex, age, national origin, or disability in its programs and services or in its hiring and employment practices.

For information regarding your civil rights, grievance procedures, or programs and services accessible to the handicapped, please contact the Superintendent's office at the address below.

Central Bucks School District~20 Welden Drive~Doylestown, PA 18901~(267) 893-2000