

BUTLER AREA SCHOOL DISTRICT

COURSE SELECTION GUIDE

2023-2024 School Year



Senior High School
(Grades 9, 10, 11 & 12)

**PROGRAM OF STUDIES
2023-2024 SCHOOL YEAR
BUTLER AREA SCHOOL DISTRICT WEBSITE: www.basdk12.org**

**Senior High School
120 Campus Lane, Butler, PA 16001
(724) 214-3200**

**PHILOSOPHY AND PURPOSE OF
BUTLER SECONDARY SCHOOLS**

The purpose of the secondary program is to help young people develop abilities enabling them to accept the responsibilities that our democratic society expects: to acquire knowledge, be self-disciplined, tolerate and empathize with others, make sound political and moral decisions, earn a living, practice American citizenship, accept the social responsibility to plan for future generations, adjust to change, and to respect and appreciate life. Along with the fundamental skills of literacy and the ability to understand desirable attitudes and behavior related to civic responsibility, it is important that students gain an appreciation for the fine and practical arts. Butler Area School District provides a unified comprehensive curriculum to prepare students for continuing education or for entering the work force. The District strives to instill a desire for further learning and to aid in the maturation process of the student academically, socially, and emotionally.

Ideally, school is not a place, but an activity in which students need to participate, directly and enthusiastically. Education is not something one gives another but is rather a self-directed, continuing process that serves the needs and interests of the individual within the community. Each individual, regardless of background, interests, or inherent abilities, deserves the chance to learn and succeed through school experiences. These educational experiences should provide opportunities for self-expression and individual creativity developed in an atmosphere based on cooperation and mutual respect, among students, parents, teachers, administrators, and all members of the

community it serves.

ADMINISTRATION

Superintendent	Dr. Brian White, Jr.
Asst. Superintendent	Dr. Brian Slamecka
Director of Curriculum, Instruction & Prof Dev	Ms. Julie Hopp
Director of Special Ed.	Mr. Aaron Royhab
Asst. Director of Special Ed.	Mrs. Cari Boozel
Sr. High Principal	Dr. John Wyllie
Sr. High Co-Principal	Mr. Jason Huffman
Sr. High Asst. Principal	Ms. Alicia Beighley
Sr. High Asst. Principal	Mr. Doug Ford
Center Ave. Principal	Mr. Keenan McGaughey

**ACADEMICS
(Program of Studies & Curricula)**

We strongly urge students to plan their academic programs with goals in mind. Any requirements for post-secondary careers should be considered in course selections.

Career decisions should be made carefully and with the help of all resources available within the school: the Career Readiness Software, **Xello**, where lessons and activities are posted, and the counselors themselves. When possible, students are encouraged to utilize community resources as well before making a career choice.

BASD & BC3 EARLY COLLEGE PIONEERS PLAN FOR 2023-2024

The purpose of the Early College initiative is to provide Butler Area High School seniors with an **on-campus** college experience that reflects the schedule, pace and expectations of a post-secondary setting, while offering them a broader selection of courses most appropriate for post-secondary plans and allowing them to begin satisfying requirements for future programs of study.

Seniors will spend the first three periods of the high school day on campus at Butler County Community College, or in transition between the institutions. Transportation will be provided by Butler Area School District. As noted below, students will be enrolled in 7 credits of college coursework each semester. While most four-year institutions accept the three-credit courses from BC3, if you have an institution of matriculation in mind, you may want to check on transferability. The two one-credit courses will certainly be counted by BC3, but may or may not transfer to another institution.

The first 40 students who submit their BC3 applications the cost for the Early College Pioneer Program will be \$0; anyone after that will be \$250 per SEMESTER, which compares very favorably to all other college credit costs.

All students in the program will be placed into College Writing (ENGL 101) or, their test scores will qualify them to take ENGL 101 with an additional support course Reading, Writing, & Reasoning ENGL 031 (0 College Credits; 1 Institutional Credit).

BC3 credit courses will need a small online component to meet seat time requirements. The allotted amount in the schedule is 80 minutes per each session. Our requirements are 85. BC3 can provide support for the online component.

Schedules Fall 2023

Session	Monday	Tuesday	Wednesday	Thursday	Friday
Group 1	College Writing	Speech	College Writing	Speech	ENGL 031 OR GENL-101 College Study Skills
Group 2	Speech	College Writing	Speech	College Writing	ENGL 031 OR GENL-101 College Study Skills

Course Descriptions

ENGL-101 College Writing (3 Credits)

This course stresses the writing process of planning, organizing, drafting, revising, and editing multi-paragraph essays. Methods of invention, types of development, and the mechanics of effective academic composition are included as well as discussion of plagiarism and source documentation. This course meets the General Education competencies of Information Literacy (IL) and Written Communication (WC).

ENGL-031 Reading, Writing, & Reasoning (0 Credits / 1 Institutional Credit)

The course is designed for students requiring skill review/support for success in English 101. It is an integrated study of reading strategies and college-level composition skills.

Requisites:

Take ENGL-101 with the same instructor based on placement test scores. - Must be taken at the same time as this course.

GENL-101 College Study Skills (CAPS) (1 Credits)

This course provides an opportunity for students to explore a variety of issues related to college success. The course will focus on study skills and personal development and will include the following topics: goal setting, campus resources, note-taking, textbook reading, time management, stress management, test preparation, test taking skills and communication skills.

COMM-201 Speech (3 Credits)

This course examines the functions and methods in contemporary public speaking through preparation of effectively organized ideas and dynamic verbal interpretation. The student is given opportunities to develop proper speaking habits, effective listening techniques, standards of criticism, and awareness of the ethical responsibilities of a speaker. This course meets the General Education Competency of Oral Communications (OC).

Schedules Spring 2024

Session	Monday	Tuesday	Wednesday	Thursday	Friday
Group 1	College Research	Economics - Micro	College Research	Economics - Micro	Financial Literacy
Group 2	Economics - Micro	College Research	Economics - Micro	College Research	

Course Descriptions

ENGL-102 Research (3 Credits)

The emphasis of this course is upon persuasion, evaluation, research and writing the research paper. There will be a continuation of careful editing of grammar and sentences. Students will continue the study and writing of thoughtful and organized expositions. This course meets the General Education competency of Critical Thinking (CT).

Spring BC3 Elective Options:

ECON-102 Economics-Micro (3 Credits)

Principles of Economics - Micro Approach is a basic study of market models: the price system, wage determination, labor sector, foreign economies and current economic problems.

SPECIAL EDUCATION SERVICES

The Butler Area School District is responsible for providing students with disabilities an individualized education program (IEP), tailored to their unique needs in grades K-12. For students who receive Special Education services, your student's current Special Education case manager will collaborate with you, general education teachers, school counselors, and building administrators to make scheduling recommendations for the upcoming school year.

For those students who receive special education services who will be transitioning to a new building for the upcoming year, their current case manager will work to review strengths, needs, services, and scheduling recommendations with the Special Education team at the receiving building. Please be in contact with your student's current Special Education case manager with questions or concerns specific to your student's program.

GUIDANCE PROGRAM

Every student in grades 6 through 12 has a counselor who is available to assist students and parents in planning programs of study for high school and post-high school needs. The counselors are also responsible for such special services as testing, college fair, career programs, assistance with plans for college, including information and help for those with financial problems, and personal adjustment. The services of the school psychologists are also available for any special testing which might be required for specific students.

A plan for every student is our goal and we urge each one, together with his/her parents, to review carefully his/her individual plans with the counselor. Administrative personnel will assist with planning as opportunities arise. Any student who has an educational, vocational, or personal problem is encouraged to visit the Guidance Office and discuss it with a counselor. Students may stop before school or between classes and secure a guidance permit for an appointment with a counselor.

GUIDANCE STAFF

Senior High School

<u>Last Name</u>	<u>Counselor</u>
CTP	Ms. Shannon McGraw
A – D	Ms. Sarah Beneigh
E – K	Ms. Jessica Abraham
L – R	Ms. Alecia Mowrey
S – Z	Mr. Mark Maloy

WITHDRAWALS

Any student withdrawing from school should report first to the school counselor for a brief exit interview. Arrangements can then be made for the student to fulfill any remaining obligations to the Butler Area School District. After the Guidance Office receives a request from the student's new school, a transcript of grades and other records can be sent.

SECONDARY GRADING POLICY PROCEDURE

The grading procedure in grades 6 through 12 should reflect a fair and consistent evaluation of a student's academic achievement.

During the first week of the course, the teacher will provide students with the following information pertaining to grades:

- Whether or not a final examination will be used and what value it will have on the final grade. Comprehensive semester exams will be administered in English language arts, world language, mathematics, science, and social studies classes in grades 9-12.
- Assessment procedures such as achievement on tests and quizzes, class participation, evaluation of homework, research papers, and make-up policy resulting from absence will be used.

At both the Intermediate and Senior High Schools, a student must complete the entire course in order to receive credit. Partial credit

will not be awarded for any course, regardless of the quarterly grades achieved. This applies to both full year and semester courses.

Course final grades will be calculated by averaging percentages. Full-year courses in grades 9-12, English Language Arts, math, science, social studies, and world language course final grades will be calculated using each of the four nine-week percentages weighted at 20% and each of the semester exams weighted at 10%. Final grades for all other full-year courses will be an average of the four nine-week percentages. Final course grades for semester social studies classes at the Senior High School will be calculated using each of the two nine-week grades as 40% and the semester exam grade as 20%. For all other semester courses, the percentages from the two nine-week grades will be averaged.

MARKING SYSTEM

Butler Area School District uses a five-letter grading system: A, B, C, D, E. Students should know the basis on which marks are determined and continually strive to meet the requirements. The following is the grading scale for the Butler Area School District.

A	Superior	100%-90%
B	Above Average	89%-80%
C	Average/Fair	79%-70%
D	Lowest Passing Mark	69%-60%
E	Not Accepted For Credit	59% & Below

Final averages will be determined using the following weights.

GRADES 9-12

1 st	Nine Weeks	20%
2 nd	Nine Weeks	20%
1 st	Semester Exam	10%
3 rd	Nine Weeks	20%
4 th	Nine Weeks	20%
2 nd	Semester Exam	10%
Final Grade		100%

REPORT CARDS/REPORT PERIODS

- Grades will be issued to students at the end of each quarterly (nine week) grading period. Report cards will be uploaded online for parents to view. A computer-generated report card will be mailed home only to those students without Internet access after all grades have been entered into the student grading system.
- Mid-quarter progress reports will be posted online when a student is failing, is in danger of failing, or has dropped two or more letter grades since the previous report card. Progress reports will be mailed home to those students who do not have Internet access.

UNIT OF CREDIT

Unit of Credit is a standardized measure of achievement devised and adopted by the Pennsylvania Department of Education to designate the quantity of work completed in individual subject fields.

CREDITS NECESSARY FOR PROMOTION

In grades nine (9) through twelve (12), one's class standing is determined by the number of satisfactorily completed courses, including courses required of all students, and the number of credits attained. At the end of grade nine (9), a student must have earned at least four (4) credits, with two (2) of the four (4) credits in core area courses, to be assigned to grade ten (10). By the conclusion of grade ten (10), each student must have earned at least ten (10) credits, with at least one (1) English credit and five (5) additional core credits, to be assigned to grade eleven (11). To be promoted to grade twelve (12), a student must have earned fifteen (15) credits, or fourteen (14) for students enrolled in Butler County Area Vocational Technical School, with nine (9) of the fifteen (15) credits earned in core area courses. A credit is based on the satisfactory completion of a course which has been offered for the equivalent of five (5) classes of at least forty (40) minutes for thirty-six (36) weeks.

SUMMER SCHOOL

A program is available in the summer for those students who need to make up failures in the core subjects or who wish to free up room in their schedules by taking Physical Education early. Summer school schedules and applications will be available on-line and in the guidance office.

Physical Education may also be taken in the summer as an accelerated course (applies only to students entering 9-12 grades). Upon the recommendation of the school administration and physical education department, the Board Education committee has approved the following guidelines for summer school physical education:

1. The District will offer as many classes as can be accommodated at the two secondary schools. Summer school will not be offered at elementary sites.
2. If there are more requests than can be accommodated, registration will be by lottery.
3. Students who schedule summer school physical education must have seven (7) periods of classes for the fall and spring semesters of the upcoming school year. Once a student has taken summer school physical education, he or she will not be permitted to drop a class during the school year unless it is a drop/add approved by the principal.
4. Students who elect summer school physical education will be expected to participate fully in all activities, including swimming. Students with medical conditions preventing them from swimming must submit documentation from a physician prior to the first day of class.

If you have any questions regarding the summer school physical education program, please contact your building principal.

POLICY ON REPEATED SUBJECTS

When a student passes a subject and chooses to repeat the course to increase his/her knowledge of that area, the following provisions apply when determining the quality point average: the grade given at the completion of the course the first time and the second time will be used. When a student fails a subject and repeats the course to obtain credit for it, the quality point for the "E", as well as the quality point for the passing grade are included in the student's final average.

CREDIT CHECK FOR GRADUATION

Beginning in grade nine and continuing through grade twelve, guidance counselors will monitor each student's credit count and notify students and parents of any credit deficiency.

Students should make up failed courses as soon as possible to maintain the proper credit count. Summer School options are available for students to make up failed courses.

GRADUATION REQUIREMENTS

A minimum of 23 credits in the ninth, tenth, eleventh, and twelfth grade is required for graduation. Required subjects that are failed must be rescheduled and completed with passing grades.

<u>Course</u>	<u>Credits</u>
● English Language Arts	4.0
English 9 (Required, 1 credit)	
English 10 (Required, 1 credit)	
English 11 (Required, 1 credit)	
English 12 (Required, 1 credit – can be earned by taking both BC3 College Within the High School courses)	
● Mathematics*	3.0
See Math Flowchart (pg. 74)	

***NOTE: Three full math credits must be earned between grades 9 through 12, regardless of the level of mathematics courses.**

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|--------------------------------|-----|
| ● Science | 3.0 |
| See Science Flowchart (pg. 83) | |
| ● Social Studies | 4.0 |

World History to 1450 (Required, 1 credit)
 World History 1450 to Present (Required, 1 credit)
 Modern Amer. History (Required, 0.5 credit)
 American Government 11 (Required, 0.5 credit)
 Economics 12 (Required, 0.5 credit)
 A.P. U.S. (can replace Modern American History and American Government)
 A.P. European History or A.P. Comparative Government (can replace Economics)
 A.P. Macro Economics (can replace Economics)

- **Arts/Humanities** 2.0

Two units Humanities, or two units Arts

- OR -

One unit Arts and One unit Humanities

Arts: Visual Arts, Practical Arts (includes Industrial Arts and Family & Consumer Sciences), Music, Band, Chorus, Leadership (4th year only)

Humanities: Social Studies, English, Language, Philosophy

- **Comprehensive Personal Health** 0.5

- **Physical Education** 1.0

Physical Education 9 (Required, .25 credit)
 Physical Education 10 (Required, .25 credit)
 Physical Education 11 (Required, .25 credit)
 Physical Education 12 (Required, .25 credit)

- **STEM**

1.0

"Science, Math, Tech Ed., Computer, Radio/TV Production, Audio Recording, BAVTS Programs"

- **Electives** 4.5

Elective credit is earned for any course a student passes that is not used to meet specific graduation requirements

TOTAL 23 Credits

Approved: Board of School Directors

April 18, 2016

Act 158 REQUIREMENT CHECKLIST

In order to earn a high school diploma in Pennsylvania, in addition to each school district's credit requirements, a student must meet an additional requirement, intended to be Option 1 listed below, but other paths are available. There are details to each of these not written here, as this is only an overview intended for awareness purposes. Counselors are tracking this for each student.

Option 1 & 2:

- Proficient/Advanced on ALL of the following Keystone Tests (Option1):
- Composite score of 4452 on all 3 Keystone Tests (Option 2):
Or Composite score of 2939 on 2 Keystone Exams and one 2020 Proficiency

Algebra I Score:	
Literature Score:	
Biology Score:	
Total Score:	

As part of Options 3, 4, & 5:

Passing grades for:

- a) English 10 Algebra I Biology AND
- b) English 10 Math 11 Science 11

Option 3: One of the following

- SAT: 1010+
- PSAT: 970+
- ACT 21+
- ASVAB ± 31
- Acceptance letter to a 4-year

Option 4: Three TOTAL Pieces of Evidence

<p>Must have at least ONE of the following:</p> <ul style="list-style-type: none"> 3+ AP Exam Acceptance to an accredited nonprofit institution other than 4-year Attainment of an industry-recognized credential Successful completion of a concurrent enrollment or post-secondary course 	<p>Two additional options:</p> <ul style="list-style-type: none"> Satisfactory completion of a service learning project Proficient or advanced on a Keystone Exam A letter guaranteeing full-time employment Certificate of completion for an internship/co-op Compliance with the NCAA's core courses w/min GPA of 2.0
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Option 5: Vo-tech grade 10 _____ grade 11 _____ grade 12 _____

Option 6: NOTES: _____

CLASS RANK

Class rank calculations shall begin when a student enters ninth grade. Algebra I, Basic and Advanced Computer Programming, and world languages taken in grades 7 or 8 will show on transcripts, but not affect class rank.

Class rank will be based on a weighted cumulative GPA for which quality points are assigned to final course grades as follows:

A=4.0 B=3.0 C=2.0 D=1.0 E=0

Additional points for courses with Honors (0.0125) or Advanced Placement (0.0500) designations will be added to the cumulative GPA to arrive at the weighted value used for class rank.

REQUIREMENTS FOR PARTICIPATION IN GRADUATION CEREMONIES

SENIORS MUST COMPLETE ALL GRADUATION REQUIREMENTS IN ORDER TO PARTICIPATE IN COMMENCEMENT!

Seniors will be notified of their status relating to graduation throughout the school year.

Seniors who are not able to schedule enough courses for the spring semester to fulfill graduation requirements will not be permitted to participate in the Commencement program. Notifications of non-participation in the Commencement program will occur through a letter being sent to the student's residence.

Seniors who have earned the correct number of credits at the conclusion of the fall semester and fail a course which is necessary to meet graduation requirements in the spring semester will not be permitted to participate in the Commencement program. When progress reports are issued for the fourth quarter in the spring semester, efforts will be made to notify seniors who are in danger of failing a course that they may not be eligible to participate in the

Commencement program. The student may participate in the graduation exercise should the course be completed satisfactorily by the conclusion of the spring semester. Students may participate in the following year's graduation ceremony upon completion of graduation requirements.

ISSUANCE OF DIPLOMA

Butler Area School District will only issue diplomas to students who have fulfilled graduation requirements adopted by the Board of School Directors of the Butler Area School District.

Diplomas will be ordered for students completing graduation requirements following their senior year only after verification that all course requirements have been satisfied.

Students must complete graduation requirements by the end of the summer following Commencement to receive a diploma for that calendar year. Students who return the following school year to complete graduation requirements will receive a diploma at the end of that school year with that graduating class.

SENIOR ACTIVITIES

- A. Seniors will be permitted to participate in all senior activities – with the exception of Commencement – whether or not they meet graduation requirements.
- B. Final determination of a student's participation in a senior activity rests with the building principal.
- C. Any exceptions to this policy must be addressed to the Board of School Directors by the Butler Senior High School Principal, in writing, for action prior to Commencement.

PERMANENT TRANSCRIPT

Permanent transcripts are maintained for 99 years for all students. These provide a record of all student grades as well as class rank. Additional educational records are available upon request, but for shorter time periods.

REQUESTING TRANSCRIPTS

Students applying to college must submit an official transcript from the guidance office. It is the student's responsibility to pay for postage. The student of record must sign the release form in the guidance office to request transcripts.

COLLEGES & UNIVERSITIES

All colleges have requirements for admission. These relate to the courses taken in high school and include rank in class, school recommendation, test scores, interviews, and extra-curricular activities.

A. Specific Requirements

1. Generally, a student must submit 15 or 16 credits taken in grades 9 through 12 in the academic fields of English, social studies, math, science, and world languages.
2. Beginning with ninth grade, all subjects and grades are listed on high school transcripts and counted as part of the credits for admission. Algebra I, Geometry, French I, German I, Latin I, or Spanish I taken in grades 7 or 8 will also be listed on the high school transcript and counted as elective credits; however, these courses will not be used in calculating a student's grade point average and class rank.
3. To best prepare for college, a student must carry a minimum of four academic subjects a year; five are recommended.
4. It is not wise to prepare to meet only the

minimum requirements for college. Many students change their minds, and the minimum requirements for one school may not be adequate for admission to another.

B. Supplementary Requirements

1. Class Rank: The emphasis is on the quality of work in academic subjects rather than quantity of credits. (See page 8 – Class Rank)
2. Recommendations: Students needing a letter of recommendation from their school counselor or teacher should give at least two weeks' notice before the application is due. Students must provide any necessary forms needed to be completed.
3. College Entrance Tests: Most colleges require standardized testing as part of their admission process. This is done either through the SAT or the ACT. PSAT: This test is a practice for the SAT. It is given in the fall of the year to juniors and is also available to interested sophomores. Registration for this test is through the Senior High School Guidance Office in the fall of the year. **THE NATIONAL MERIT SCHOLARSHIP SEMI-FINALISTS ARE SELECTED USING A STUDENT'S JUNIOR YEAR PSAT SCORES.**

SAT: This test measures evidence-based reading, math and writing.

Subject Tests: These are specific subject tests as required by the college. This testing is required by the more selective colleges.

ACT: This test measures writing skills and four academic areas: English, mathematics, reading, and science reasoning.

***Students are responsible for knowing what tests are required and when they*

are to be taken. Registration materials are available in the Guidance Office. It is recommended that students take either the SAT or ACT the spring of their junior year. Butler Senior High School is a testing center for all of the above tests. Requests for testing accommodations must be processed through the guidance office.

4. Interview: Some schools require a personal interview with an admissions officer or an alumnus.
5. Extra-Curricular Activities/Community Service: Colleges will ask for a record of extra-curricular activities both in the community and in school.
6. Attendance: Schools are interested in attendance records.

C. Application Procedure

Online: Students filing college applications online must submit official transcripts through the guidance office.

Paper: Students sending paper applications must bring the completed paper applications along with required fees to the guidance office and request to have official transcripts mailed.

Official transcripts must be mailed from the guidance office.

It is the student's responsibility to provide necessary postage to mail the college application.

FINANCIAL AID

The Senior High Guidance Office sponsors a College and Career Fair in September that includes approximately 90 different colleges, technical schools and the Armed Forces. On that night we will also host an informational session regarding the financial aid process. Financial aid starts with the FAFSA (Free Application for Federal Student Aid). The

information you provide on this federal and state form will determine how much aid and what types of aid you will be offered. It is important to be mindful of individual school deadlines. Most schools require the FAFSA; however, some schools require the CSS Profile. This form is similar to FAFSA but is not a state or federal form and does require a fee.

In the fall we offer a FAFSA completion session at the Senior High School. During this session you will be able to submit your FAFSA that evening during the sessions.

Representatives from PHEAA will be there to answer your questions.

GED TESTING

General Educational Development Tests are available to anyone who does not have a high school diploma. To be eligible, the applicant must be 18 years of age. Those interested in GED testing should register at GED.com. Students may also register and schedule by phone at 1-877-EXAMGED.

EXPLANATION OF ABILITY LEVELS

All Levels: Students from all ability levels may schedule this course.

Basic Level: Course content is designed for the student as identified in the criteria in the next column: Admission to Basic Level Courses.

Academic Level: Course content is designed for the middle ability achieving student. (includes courses with "Academic" course titles)

Average and Above: Course content is more challenging than academic level. (Includes certain math and foreign language courses grades 9-12)

Honors Level: Course content is designed for the high achieving student.

Advanced Placement: College level courses offered to students in grades 10, 11 and 12

Gifted Level: Course content is designed for the identified gifted student. Individual and group modifications will be provided.

CRITERIA: ADMISSION TO BASIC LEVEL COURSES

For placement in the following basic level classes: English, science, and social studies students must meet the following criteria:

- Scoring Below Basic on the most recent PSSA Reading Assessment
- Teacher recommendation

For mathematics basic level placement, the student must meet the following criteria:

- Scoring Below Basic on the most recent PSSA Math Assessment.
- Teacher Recommendation



COLLEGE TECH PREP PROGRAMS

The Butler Area School District offers College Tech Prep Programs in Allied Health Technologies, Child Development, Communications & Media Studies, Business Management and Finance, Engineering-Related Technologies, and Information Technologies. College Tech Prep is a college preparatory program leading to a two-year and four-year college degree with an emphasis on technical skills and practical applications of knowledge. An explanation of the programs and suggested course sequences can be found on pp. 38-44

*Look for the College Tech Prep **Star** logo in the following course descriptions to identify applied academic courses and technical courses in the College Tech Prep Program.*

Contact Mrs. Shannon McGraw, College Tech Prep Coordinator, at 724-214-3208 with any questions regarding the Program and/or

courses.

ADVANCED PLACEMENT PROGRAMS

Advanced placement courses are college-level courses for secondary school students. Students may elect to pay to take the “Advanced Placement Test” in any subject area in May. As a result of this test, students may qualify for college credits at participating colleges and universities.

For more information on these programs, contact your guidance counselor or Senior High Principal, Dr. John Wyllie.

COLLEGE WITHIN THE HIGH SCHOOL PROGRAM

Butler Senior High School offers junior and senior students the opportunity to enroll in dual enrollment courses offered by three local accredited colleges. Students wishing to take part in these courses must meet the minimum grade point average requirements of that institution.

BUTLER COUNTY COMMUNITY COLLEGE

Five Butler County Community College dual enrollment courses (technical math, psychology, sociology, college research, and college writing) will be offered through the Butler Senior High School. Please note that not all psychology and sociology courses offered through the Senior High School are dual enrollment courses. Students enrolled in these courses will receive elective credit towards fulfilling graduation requirements and three BC3 credits. The courses are taught by Butler Senior High School teachers and mirror the BC3 curriculum.

Students interested in scheduling these courses must pay an application fee, three-credit tuition fee per course, and must also purchase the textbook. If you would like additional information, please contact the guidance office.

CARLOW UNIVERSITY

For select Senior High School courses, students have the option to pay a tuition fee in order to receive both high school graduation credit and college credits through Carlow University. For a listing of the participating courses, fees, and accepting post-secondary institutions, please contact the guidance office.

COMMUNITY COLLEGE OF BEAVER COUNTY

Students in grade 11 and 12 will have the opportunity to pay a tuition fee and earn a minimum of 12 postsecondary credit hours through the Community College of Beaver County (CCBC) while participating in the Professional Piloting or Air Traffic Control programs. These courses are taught in conjunction with Butler County Community College and are available there and at the Butler County Airport. Students are required to complete an application, receive a recommendation from his or her school counselor, provide a transcript and possibly take placement exams. Students are required to maintain a minimum 2.0 GPA throughout enrollment in CCBC courses.

GIFTED EDUCATION PROGRAM

Programs for the gifted child in the Butler Area School District may have three components, beginning with the Gifted Individualized Education Program (GIEP) and including options and modifications. The GIEP is a written form that spells out the specific programs and services the child will receive. The GIEP also contains goals and objectives for the child, the date services are to start, and other information about the program. Options are all of those co-curricular activities and offerings of an enrichment nature from which any gifted student may select. Preparation for and participation in the selected options usually require a combination of some scheduled in-school time and/or out-of-class time and some out-of-school time on the part of the student. Modifications are those alterations of an

acceleration and/or enrichment nature made in scheduling classes or within the classroom that are designed because there is strong evidence that the student has demonstrated advanced knowledge and/or skills in certain areas. Usually, this means acceleration in skill areas such as math and acceleration, enrichment, or both in the content areas such as social studies. Modifications within the classroom are made by the teacher as indicated in the GIEP. For additional information on Gifted Education, parents and students should refer to Butler Area School District's Gifted Education Program Handbook.

CO-OP

Students have an opportunity to apply their academic, technical, and interpersonal skills to a work-based learning experience, including job shadowing, site visits, pre-apprenticeships and mock interviews all leading to possible employment. This course is listed under Family Consumer Science

ENGLISH LEARNER (EL) PROGRAM

English Learner Students (EL's) will receive instruction in the same curriculum areas as the district's English speaking students. Equity in providing for these students' successful achievement of the standards and graduation requirements will be addressed by the regular classroom teachers and/or the EL teacher. The amount and type of EL instruction provided will depend upon the student's level of language development and proficiency as determined by an appropriate English Language Proficiency assessment. Instruction will take place as a "pull out" activity or in the mainstream classroom with supportive services.

STUDY LOAD

Students must schedule at least six class periods per semester in grades 9-11. Seniors must schedule at least five class periods per semester. The maximum number of unrepeated credits a student will be awarded in a calendar year 8.25.

The quality of work to be maintained, as well as the number of credits to be earned, should be the guiding principle in scheduling. Study periods in the school day should be used efficiently, and adequate time during out-of-school hours should be reserved for homework and preparation for the next day's lessons.

SCHEDULE CHANGES

Students are urged to take a serious approach to the entire course selection process. Course requests submitted in the spring are open to changes only through July 14, 2023. Courses will be considered final after that date, with exceptions made for the following reasons only:

1. To correct entry or mechanical errors.
2. To ensure that graduation requirements are being met.
3. To replace a study hall with an elective within the first five days of a semester, provided remaining classes are not disturbed.
4. To adjust the level of a course if placement appears inappropriate. Such changes will only be considered following the first quarter of the course. A.P. courses are exempt from level change consideration.
5. To allow for a change in Learning Pathway, which results in a course not being available in the new Pathway.
6. Pathway changes may occur at the change of each 9-week period.

Withdrawing from a course will generally not be considered other than for extreme circumstances. Should a course withdrawal be granted, the final grade will be recorded as a failing grade and will be calculated into the student's QPA as such.

AUDITING CLASSES GUIDELINES

Students may be permitted to audit a semester of a course according to the following conditions:

1. The course is a full year course required to meet academic graduation requirements. Only English, math, science, social studies, and

world language classes will be considered.

2. The student is failing or in danger of failing at the conclusion of the first semester, but has demonstrated a concerted effort to pass the course.
3. Auditing requests must be made at the conclusion of the first semester and not later than the first ten school days of the second semester. Auditing approvals are not reversible.
4. While auditing, the student is expected to continue to make a concerted effort to complete assignments and take exams.
5. The student must schedule the entire course the following year.
6. The parent, counselor, teacher, and principal must approve the auditing request.

RATIONALE: Students who make a concerted effort but who are doing poorly in a required course will have the opportunity to remain in the class for the second semester and attempt to learn without a grade or credit being issued. The student will be better prepared to repeat the course and will not have two failing grades on his/her transcript.

GUIDELINES FOR SELECTING COURSES

1. Review the course offerings and descriptions in the academic areas and the recommended course sequences included in this Course Selection Guide.
2. Follow the instructions given by guidance counselors and/or administrators during their presentations in classes.
3. Consult your parents and teachers for course recommendations.
4. Complete and Submit the **Course Selection Sheet**.

BASD Secondary Instructional Options

In selecting courses, there is a distinction between a student's chosen **Attendance Model** and the **Instructional Model** in which any given course is offered. For the 2023-24 school year, Butler Area School District students are able to choose one of three **Attendance Models**, while courses will be offered through one or more **Instructional Models**.

Attendance Models - Based on the student's entire day

In-person (Attend school building for classes)

Cyber (Complete courses online)

Hybrid (Mix of online and in-person courses by class)

Instructional Models - Based on each individual course

Live Instruction at School

In-person at school

Virtual Blended - Self Paced With Weekly Deadlines

Edgenuity

Google Classroom

The Virtual Blended (VB) model combines asynchronous setting with the addition of live support when needed. The Blended Classroom will primarily use Edgenuity. However, for some courses other platforms such as Google Classroom may be used.

Students will be required to maintain a steady pace in their coursework. In addition, they will be required to attend scheduled live support sessions. The Virtual Blended model offers the flexibility of a self-paced course combined with scheduled teacher office hours to support students.

Virtual Blended classes are available to students in grades 6-12. Scheduling is flexible, however once enrolled, student attendance is required.

Virtual Live - Combination of Scheduled Synchronous and Asynchronous

Edgenuity with scheduled regular live sessions

Google Classroom with scheduled regular live sessions

Butler Area School District will be offering students a unique virtual instructional setting for the 2023-2024 school year. Students may elect to participate in our Virtual Live (VL), which will be a combination of daily lessons through Edgenuity or Google classroom and scheduled live sessions with the teacher for additional instruction and support. Virtual Classroom students will have the opportunity to interact with their teachers and classmates during their live sessions, which will be scheduled on set days and times.

The Virtual Live (VL) will follow our traditional school day and school calendar. Daily lessons will be on Edgenuity or Google classroom, and will be supported through scheduled live lessons and support.

Virtual classes are available to students in grades 6-12. Scheduling is flexible, however once enrolled, student attendance is required.

Students are expected to meet the following expectations:

1. Attend assigned live classes and live support sessions as scheduled.
2. Virtual Blended students are expected to meet the weekly course deadlines.
3. Make consistent academic progress.
4. Participate in standardized testing unless exempted.
5. Specific course participation requirements as specified in the course registration book.

Failure to meet these requirements could result in one of the following actions:

1. Being assigned to attend school at their respective normal school for periodic in person check in sessions.
2. Being assigned to attend school at their respective normal school and completing cyber work in person.
3. Being assigned to attend Centre Avenue Community School and completing cyber work in person.
4. Being removed from the Cyber Education program and returning to school in person.

RECOMMENDED COURSE SEQUENCES

GRADES 9-12

INTRODUCTION:

Butler Area School District's graduation requirements and recommended course sequences are provided to assist you in planning your schedule for next year and each subsequent year of your high school career. Listed are samples of programs designed not only to assist you in keeping track of your credit count but also to ensure that you have earned the necessary credits if you plan to continue your education beyond high school. Some of the choices may be changed to meet an individual's special interests and to provide for varied ability levels.

COLLEGE PREPARATORY A
(Concentration in Mathematics and Science)

GRADE 9	GRADE 10
English 9 (Honors)	English 10 (Honors)
World History to 1450 (Honors)	World History 1450 – Present (Honors)
Honors Geometry OR Honors Algebra II	Honors Algebra II OR Honors Pre-calculus
Honors Biology	Honors Chemistry
1 st OR 2 nd year of World Language	1 st , 2 nd , OR 3 rd year of World Language
Physical Education (1 semester)	Physical Education (1 semester)
	Health
Electives	Electives
GRADE 11	GRADE 12
English 11 (Honors OR AP)	English 12 (Honors OR AP)
Honors Modern American History (1 semester) & Honors Am. Government (1 semester) OR AP American History (full year)	Honors Economics (1 semester req.) OR AP European History (full year) OR AP Comparative Government
AP Calculus AB OR Honors Pre-Calculus	AP Calculus AB OR AP Calculus BC
AP Physics I, AP Physics C	AP Biology, AP Chemistry, AP Physics II or C
Computer Course	Additional Advanced Sciences
World Language (if desired)	World Language (if desired)
Physical Education (1 semester)	Physical Education (1 semester)
Health	
Electives	Electives

A course sequence in Mathematics starting in seventh grade may be continued by those students with well above-average abilities in this area so that AP Calculus or AP Statistics maybe taken in twelfth grade. Please refer to the Mathematics Sequence Chart on page 52. AP Calculus BC may only be taken after successful completion of AP Calculus AB.

Electives to fill out schedules may be chosen from Art, Business, Computer and Information Technology, Family and Consumer Science, Industrial Arts/Tech Ed., JROTC, or any of the academic subject areas.

COLLEGE PREPARATORY B
(Concentration in Arts and Humanities)

GRADE 9	GRADE 10
English 9 (Honors)	English 10 (Honors)
World History to 1450 (Honors)	World History 1450 - Present (Honors)
Mathematics (according to ability)	Mathematics (according to ability)
Academic or Honors Biology	Comprehensive Science, Biology, or Honors Chemistry
1 st OR 2 nd year of World Language	1 st , 2 nd , OR 3 rd year of World Language
Physical Education (1 semester)	Physical Education (1 semester)
	Health
Electives	Electives
GRADE 11	GRADE 12
English 11 (Honors OR AP)	English 12 (Honors OR AP)
Honors Modern American History (1 semester) & Honors American Government (1 semester) OR AP American History (full year)	Honors Economics (1 semester) OR AP European History (full year) OR AP Comparative Government
Mathematics (according to ability)	Mathematics (recommended)
Honors Chemistry or AP Physics 1	Additional Science (recommended)
World Language (if desired)	World Language (if desired)
Physical Education (1 semester)	Physical Education (1 semester)
Health	Computer Course (1 semester)
Electives	Electives

Please refer to the Mathematics Course Sequence Chart on page 52 to determine the appropriate course for each year.

Arts and Humanities include such majors as English, Political Science, Creative or Performing Arts, World Language, etc.

Electives to fill out schedules may be chosen from Art, Business, Computer and Information Technology, Family and Consumer Science, Industrial Arts/Tech Ed., JROTC, or any of the academic subject areas.

COLLEGE TECH PREP PROGRAMS

**Allied Health Technologies
Business Management and Finance
Communication and Media Studies**

**Engineering-Related Technologies
Information Technologies
Child Development Program**

College Tech Prep programs have been implemented nationwide to give students a solid background of academics and technology and prepare them for the career challenges of the future. College Tech Prep, short for College Technical Preparatory, does not mean preparation for technical school, but preparation for careers in today's age of technology. It is a special program of study that provides the technical preparation to allow a student to continue his or her education in an associate degree or baccalaureate degree program. In addition to their technical courses, the students follow a rigorous program of applied academics that is designed to teach course content in context with issues and topics surrounding work, home, society, and the environment. The applied academic courses engage students in cooperative teams, allowing them to participate in laboratory-centered, hands-on activities that make learning practical and relevant. Academics will be closely monitored, and students are encouraged to maintain effective communication with their teachers and attend tutoring sessions when offered.

The College Tech Prep Program has been developed in cooperation with local colleges and universities such as **Butler County Community College, Indiana University of Pennsylvania, Indiana University of Pennsylvania Northpointe Campus, Penn State University, Point Park University, and Pittsburgh Technical College**. Through articulation agreements with these institutions, completion of the Butler Area School District's College Tech Prep Program guarantees a student's acceptance into their programs and/or credit for course work completed in high school. Please refer to the College Tech Prep Handbook for specific information about articulation agreements with colleges and universities. **In addition to the programs outlined on the following pages, some colleges/universities do require or highly recommend two years of a foreign language.** College Tech Prep students may, however, attend any college/university of their choice in the same manner as any other Butler Area School District graduate who meets the criteria of that institution. For more information about these programs, contact Mrs. Shannon McGraw, College Tech Prep Coordinator, at 724-214-3208, or Dr. Brian Slamecka, Assistant Superintendent, at 724-214-3106.

Students must have parent permission, along with teacher and counselor recommendation, to enroll in the College Tech Prep Program. They must successfully complete Pre-Algebra and must maintain at least a "C" average in his/her academic classes. Academic strengths should be considered when selecting interest areas. **Students with an interest in the Allied Health or Engineering-Related Technologies professions should be aware that strengths in science and mathematics are especially beneficial for these programs.** Students may enroll in the College Tech Prep programs when they schedule their classes for grades 9, 10, or 11. Once enrolled in the program, students are expected to maintain a "C" average in the Academic and Technical courses. Those students who do not maintain a "C" average will be placed on academic probation until their grades improve, or they may be removed from the program. College Tech Prep students are also expected to conduct themselves in a manner conducive to a good educational environment. Students who repeatedly violate school rules may jeopardize their participation in the program.

The Program Scope and Sequences for College Tech Prep Programs can be found on the following pages.

ALLIED HEALTH TECHNOLOGIES PROGRAM SCOPE AND SEQUENCE

Students with an interest in the Allied Health or Engineering-related professions should be aware that strengths in science and mathematics are especially beneficial for these programs.

Subject	Grade 9	Grade 10	Grade 11	Grade 12
MATH	Algebra I or Any higher math	Geometry or Any higher math	Algebra II or Any higher math	Algebra III or Honors Precalculus
ENGLISH	Academic or Honors English 9	Academic or Honors English 10	Academic or Honors English 11	Academic or Honors English 12
SCIENCE	Academic Biology or higher	Academic Chemistry or higher	Academic Physics or higher	Any Science
SOCIAL STUDIES	Academic or Honors World History to 1450	Academic or Honors World History 1450-Present	Modern American History, Academic (18 wks.) American Government, Academic (18 wks.)	Economics, Academic (18 wks.)
OTHER	Physical Education (18 wks.)	Physical Education (18 wks.) Personal Health *	Physical Education (18 wks.) Personal Health *	Physical Education (18 wks.)
TECHNICAL PROGRAM (Required)	Computer Applications I (18 wks.) Computer Applications II (18 wks.)	Forensic Science (18 wks.)	Health Care Careers (18 wks)	Anatomy and Physiology (36 wks.) Molecular Biology (18 wks.)
Recommended Electives <i>(Not Required)</i>	CPR/First Aid Family & Prenatal Development Infant & Toddler Development Forensic Science 2		CPR/First Aid Early Childhood Development Adolescent Development Psychology Sociology	
* = Students take Personal Health in either grades 9-12.				

BUSINESS MANAGEMENT & FINANCE PROGRAM SCOPE AND SEQUENCE

SUBJECT	GRADE 9	GRADE 10	GRADE 11	GRADE 12
MATH	Algebra I or Any higher math	Geometry or Any higher math	Algebra II or Any higher math	Algebra III or Any higher math
ENGLISH	Academic or Honors English 9	Academic or Honors English 10	Academic or Honors English 11	Academic or Honors English 12
SCIENCE	Academic Biology or higher	Academic Chemistry or higher	Academic Physics, or higher	Any Science
SOCIAL STUDIES	Academic or Honors World History to 1450	Academic or Honors World History 1450-Present	Modern American History, Academic (18 wks.) American Government, Academic (18 wks.)	Economics, Academic (18 wks.)
OTHER	Physical Education (18 wks.)	Physical Education (18 wks.) Personal Health *	Physical Education (18 wks.) Personal Health *	Physical Education (18 wks.)
Technical Program – Business Management and Finance				
Required Technical Program	Intro. to Business (36 wks.)	Computer Applications I (18 wks.) Computer Applications II (18 wks.)	Accounting I	<u>Choose One Option:</u> Accounting II or Business Management & Marketing
Recommended Electives	Introduction to Programming Web Publishing		Accounting II Business Law Business Management/Marketing Personal Finance	
* = Students take Personal Health in either grades 9-12				

COMMUNICATION AND MEDIA STUDIES PROGRAM SCOPE AND SEQUENCE

Subject	Grade 9	Grade 10	Grade 11	Grade 12
MATH	Algebra I or Any higher math	Geometry or Any higher math	Algebra II or Any higher math	Algebra III or Any higher math
ENGLISH	Academic or Honors English 9	Academic or Honors English 10	Academic or Honors English 11	Academic or Honors English 12
SCIENCE	Academic Biology or higher	Academic Chemistry or higher	Academic Physics or higher	Any Science
SOCIAL STUDIES	Academic or Honors World History to 1450	Academic or Honors World History 1450-Present	Modern American History, Academic (18 wks.) American Government, Academic (18 wks.)	Economics, Academic (18 wks.)
OTHER	Physical Education (18 wks.)	Physical Education (18 wks.) Personal Health *	Physical Education (18 wks.) Personal Health *	Physical Education (18 wks.)
Strand 1 Technical Program – Journalism & Public Relations				
TECHNICAL PROGRAM <i>(Required)</i>	Introduction to Media Communications, Journalism I	Journalism II		
Recommended Electives <i>(Not Required)</i>	Intro to Video Production Computer Applications I/II Photography and Graphic Arts		TV/Video Production, Part I TV/Video Production, Part II Advanced TV Radio Production Computer Applications I	
		Web Publishing		
Strand 2 Technical Program – Broadcast Communications				
TECHNICAL PROGRAM <i>(Required)</i>	Intro to Media Communications (18 wks.) Intro to Video Production (18 wks.)	Television Production I (18 wks.) Television Production II (18 wks.) Radio Production (18 wks.) Advanced Television Production (18 wks.)		
Recommended Electives <i>(Not Required)</i>	Photography and Graphic Arts, Computer Applications I/II,		Computer Applications I	
		Web Publishing		
* = Students take Personal Health in either grades 9-12				

ENGINEERING-RELATED TECHNOLOGIES PROGRAM SCOPE AND SEQUENCE

Students with an interest in the Allied Health or Engineering-related professions should be aware that strengths in science and mathematics are especially beneficial for these programs

SUBJECT	GRADE 9	GRADE 10	GRADE 11	GRADE 12
MATH	Algebra I or Any higher math	Geometry or Any higher math	Algebra II or Any higher math	Algebra III or Any higher math
ENGLISH	Academic or Honors English 9	Academic or Honors English 10	Academic or Honors English 11	Academic or Honors English 12
SCIENCE	Academic Biology or higher	Academic Chemistry or higher	Academic Physics or higher	Any Science
SOCIAL STUDIES	Academic or Honors World History to 1450	Academic or Honors World History 1450-Present	Modern American History, Academic (18 wks.) American Government, Academic (18 wks.)	Economics, Academic (18 wks.)
OTHER	Physical Education (18 wks.)	Physical Education (18 wks.) Personal Health *	Physical Education (18 wks.) Personal Health *	Physical Education (18 wks.)
Technical Program (Required)	Exploring CAD	Intro to Engineering or Architectural Design	Advanced Architecture or Advanced Engineering	Advance Architecture or Advanced Engineering
** IUP Northpointe Electro Optics Options	Algebra II or any higher math, Physics or any higher science.			
Recommended Electives <i>Select minimum of two courses</i>	Computer Applications I & II Engineering Design and Product Development Materials Engineering Advanced Materials Engineering Power Transportation Technology			
* = Students take Personal Health in either grades 9-12 ** = Refer to the CTP handbook for the complete IUP Northpointe Electro-Optics Articulation Agreement				

INFORMATION TECHNOLOGIES PROGRAM SCOPE AND SEQUENCE

SUBJECT	GRADE 9	GRADE 10	GRADE 11	GRADE 12
MATH	Algebra I or Any higher math	Geometry or Any higher math	Algebra II or Any higher math	Algebra III or Any higher math
ENGLISH	Academic or Honors English 9	Academic or Honors English 10	Academic or Honors English 11	Academic or Honors English 12
SCIENCE	Academic Biology or higher	Academic Chemistry or higher	Academic Physics or higher	Any Science
SOCIAL STUDIES	Academic or Honors World History to 1450	Academic or Honors World History 1450-Present	Modern American History, Academic (18 wks.) American Government, Academic (18 wks.)	Economics, Academic (18 wks.)
OTHER	Physical Education (18 wks.)	Physical Education (18 wks.) Personal Health *	Physical Education (18 wks.) Personal Health *	Physical Education (18 wks.)
Strand 1 Technical Program – Information Technology Programming Strand				
Required Technical Program	Computer Applications I Introduction to Programming		C++ Programming Introduction to JAVA Programming Intermediate JAVA Programming	
Recommended Electives	Computer Applications II Web Publishing		Programming with Python	
Strand 2 Technical Program – Information Technology Systems Strand				
Required Technical Program	Computer Applications I Computer Applications II Web Publishing			
Recommended Electives	Introduction to Programming Introduction to JAVA Programming Intermediate JAVA Programming C++ Programming			
* = Students take Personal Health in either grades 9-12				

CHILD DEVELOPMENT PROGRAM SCOPE AND SEQUENCE

SUBJECT	GRADE 9	GRADE 10	GRADE 11	GRADE 12
MATH	Algebra I or Any higher math	Geometry or Any higher math	Algebra II or Any higher math	Algebra III or Any higher math
ENGLISH	Academic or Honors English 9	Academic or Honors English 10	Academic or Honors English 11	Academic or Honors English 12
SCIENCE	Academic Biology or higher	Academic Chemistry or higher	Academic Physics or higher	Any Science
SOCIAL STUDIES	Academic or Honors World History to 1450	Academic or Honors World History 1450-Present	Modern American History, Academic (18 wks.) American Government, Academic (18 wks.)	Economics, Academic (18 wks.)
OTHER	Physical Education (18 wks.)	Physical Education (18 wks.) Personal Health *	Physical Education (18 wks.) Personal Health *	Physical Education (18 wks.)
Child Development Program (Required)	Family & Prenatal Development (18 wks.)	Infant & Toddler Development (18 wks.)	Early Child Development (18 wks.) and/or Adolescent Development (18 wks.) and Field Experience Development (18 wks.)	
Recommended Electives	CPR/First Aid Music Art Lifeguarding (Grade 10 only) Computer Applications I/II		Computer Applications I CPR/First Aid Lifeguarding Psychology Sociology	
* = Students take Personal Health in either grades 9-12				

VOCATIONAL-TECHNICAL PROGRAMS
(In Cooperation with Butler Co. Area Vocational-Technical School)

This program is intended for those students who are planning to attend the Butler County Area Vocational-Technical School during the tenth, eleventh and twelfth grades. In order to take advantage of the Statewide Articulation Agreements through Butler County Area Vocational-Technical School's Programs of Study, students are advised to take college preparatory courses.

GRADE 9	GRADE 10
English 9, Academic	English 10, Academic
World History to 1450, Academic	World History 1450-Present, Academic
Mathematics (according to ability)	Mathematics (according to ability)
Comprehensive Science 9 or Biology	Academic Chemistry or Comprehensive Science 10
Physical Education (1 semester)	Physical Education (1 semester)
	Comprehensive Personal Health
Electives	

Please refer to the Mathematics Course Sequence Chart on page 52 to determine the appropriate course for each year.

Electives to fill out schedules may be chosen from Art, Business, Computer and Information Technology, Family and Consumer Science, Industrial Arts/Tech Ed., JROTC, or any of the academic subject areas.

Grades 10, Grade 11, and Grade 12

During these years, students will spend two or three periods per day at BCAVTS and the remainder of the day at Butler Senior High School completing other graduation requirements in the General Studies Program. Diplomas are issued by the home school. Potential courses of study at BCAVTS include:

- | | |
|--|-------------------------|
| AB/Collision Repair | Diversified Occupations |
| Air Conditioning/Heating/Electrical | Graphic Designs |
| Automotive Technology | Health Assistant |
| Building Construction | Heavy Equipment |
| Carpentry | Machine Technology |
| Computer Networking & Telecommunications | Protective Services |
| Cosmetology | Sports Medicine |
| Culinary Arts | Welding |

A complete listing of courses available at the BCAVTS and descriptions can be found on page 85.

GENERAL STUDIES

This program is intended for those students who are planning to attend post-secondary education.

GRADE 9		GRADE 10	
English 9, Academic		English 10, Academic	
World History 1450, Academic		World History 1450-Present, Academic	
Mathematics (according to ability)		Mathematics (according to ability)	
Comprehensive Science 9 or Biology		Biology or Comprehensive Science 10	
Physical Education (1 semester)		Physical Education (1 semester)	
		Comprehensive Personal Health	
Electives		Electives	
GRADE 11		GRADE 12	
English 11, Academic		English 12, Academic	
Modern American History, Academic (1 semester required) American Government, Academic (1 semester required)		Economics, Academic (1 semester required)	
Mathematics (according to ability)		Mathematics (if desired or needed for graduation)	
Science (according to ability)		Science (if desired or needed for graduation)	
Physical Education (1 semester required)		Physical Education (1 semester required)	
Health			
Electives		Electives	

Please refer to the Mathematics Course Sequence Chart on page 52 to determine the appropriate course for each year.

Electives to fill out schedules may be chosen from Art, Business, Computer and Information Technology, Family and Consumer Science, Industrial Arts/Tech Ed., JROTC, or any of the academic subject areas.

QUESTIONS/NOTES

ART

INSTRUCTIONAL MODE KEY

IP: In-person
VB: Virtual Blended
VL: Virtual Live

INTRODUCTION TO DRAWING

IP, VL
AD10

Grades 9-12 18 wks. 0.5 credit
All Levels

In this course, the student will begin by learning the fundamentals of value and shape. Lessons will encompass the exercises used in creating value accurately. The student will also learn how to break down objects into basic shapes for creating a more proportional and accurate drawing. Throughout this course different mediums and materials will be used to reinforce the learning process.

GENERAL ART

IP
CN: AG10

Grades 9-12 18 wks. 0.5 credit
All Levels

This course will introduce the student to the basic principles of art. It will touch on many different experiences in drawing, painting, art appreciation, practical art, and basics of color and design. The student will complete a number of projects and will be encouraged to experiment with media and techniques. The emphasis will be on teaching the student to develop his/her visual and creative powers and develop an enjoyment and appreciation of art.

ADVANCED DRAWING

IP, VL
CN: AD20

Grades 9-12 18 wks. 0.5 credit
All Levels

Prerequisite: Intro to Drawing

In this course, the student will work on a more independent basis. He/she will be encouraged to experiment freely with media techniques in both areas and develop a style through media that he/she is most comfortable working with. A more extensive amount of time will be allowed so that the student may refine the skills they have learned in the previous drawing classes.

INTRODUCTION TO SCULPTURE

IP
CN: AS10

Grades 9-12 18 wks. 0.5 credit
All Levels

In this course, students will be introduced to various three-dimensional works of art, and the art of making it. Students will experiment with a variety of different materials, for example: plaster, clay, paper, metal, glass, and recyclables. There will be an extensive study into the process of various sculptural methods used throughout history and in present day. Overall, Introduction to Sculpture will explore the many ways to produce, discuss, and critique three-dimensional works of art.

ADVANCED SCULPTURE
IP
CN: AS20

Grades 9-12 18 wks. 0.5 credit
All Levels
Prerequisite: Intro to Sculpture

This course will allow students to work more independently than Introduction to Sculpture. It will focus on intensive studies into sculptural mediums, such as clay, plaster, glass, metal, etc. Students will expand upon previous knowledge and will problem-solve to expand that knowledge base.

INTRODUCTION TO PAINTING
IP
CN: AP10

Grades 9-12 18 wks. 0.5 credit
All Levels

The student will explore the traditional and experimental techniques in the area of water-color, tempera painting, acrylics, and mixed media. The realistic and non-objective approaches to painting will be explored. The emphasis will be on teaching the student to develop his/her visual and creative powers and appreciation of different painters and their style of painting.

ADVANCED PAINTING
IP
CN: AP20

Grades 9-12 18 wks. 0.5 credit
All Levels
Prerequisite: Intro to Painting

This course will focus on the advanced techniques and different processes of painting. Students will continue to refine the skills they learned in Intro to painting as well as collaborate with classmates. Advanced Painting is designed for the student who would like to develop his/her skills and creativity more extensively.

APPLIED IMAGING TECHNOLOGY
IP
CN: AI30

Grades 9-12 18 wks. 0.5 credit
Prerequisite: Intro Photography and Graphic Arts or Digital Photography and Graphic Arts

Building on the basic knowledge and experiences from the prerequisite class, students are exposed to higher-level techniques and processes in Applied Imaging Technology. Students will further explore digital design as a medium for creative expression and practical application. With the use of several advanced graphic design programs, students will learn post-production editing based on industry standard. Additionally, students will be challenged to use sophisticated techniques to find inspiration and their own vision as an artist, marketing designer, or photographer. By expanding on design principles and hands on application, students create a body of work that reflects a range of problem-solving and technical ability. Further, students will develop projects through which the use of science and technology prove imperative. Using the scientific method, students will create unique works by mixing technical media settings with critical thinking. Cameras will be provided by the district for this course.

DIGITAL PHOTOGRAPHY AND GRAPHIC ARTS
IP
CN: AF20

Grades 9-12 18 wks. 0.5 credit
All Levels

The digital photography course emphasizes camera operation, effective composition, and creative expression. Topics include techniques in digital photography, camera and lens operation, memory cards, file formats, exposure, white balance, composition, lighting, creativity, image editing software and output. Using graphic design based computer programs and equipment, students will demonstrate an understanding of digital editing, printers, and scanners to capture, manipulate, and output

images. This course introduces students to graphic design as a form of visual communication through the use of typography, image, form, and color. Projects explore design processes in visual communication, creative problem solving, and basic design practice. Personal or school-provided cameras can be used.

NOTES

ART APPRECIATION IP, VB CN: AA30

Grades 9-12 18 wks. 0.5 credit
All Levels

This course consists of a broad overview of art history in general. It is made up of a lecture/slide-viewing experience with discussion of artist and styles. An emphasis will be placed on a time period from 1850 to the present. This course is specifically recommended for college-bound students who may be required to take art by a college; many colleges and universities and even liberal arts schools require it.

CERAMICS IP CN: AC10

Grades 9-12 18 wks. 0.5 credit
All Levels

Students may take a maximum of four semesters of Ceramics for credit.

These courses involve the use of clay to make functional projects. Emphasis will be placed on original works. Students will work in all the hand built areas and wheel throwing. Students will also be involved with loading and unloading a kiln, mixing glazes, and reprocessing used clay. In subsequent semesters, the emphasis will be on expanding the student's knowledge and working in areas of combining hand build processes.

BUSINESS, COMPUTER, & INFORMATION TECHNOLOGY

INSTRUCTIONAL MODE KEY

IP: In-person

VB: Virtual Blended

VL: Virtual Live



ADVANCED STANDING CREDIT BUTLER COUNTY COMMUNITY COLLEGE

Students taking Accounting I/II may receive credit for the introductory Butler County Community College course in the same field. To be eligible, the following criteria must be met:

1. An "A" or "B" must be earned on the high school level.
2. Application must be made with the College within two years of the course work. Applications may be obtained from the Business Department Chairperson at the Senior High School.



INTRODUCTION TO BUSINESS IP, VB CN: BG10

Grades 9-12 36 wks. 1.0 credit
All Levels

This course provides the student a broad background about the modern business world. It is an essential course for students who are considering choosing a business major. This course is designed to acquaint students with the role of business in our economy, the forms of organizations, various business functions such as management, personnel, advertising, marketing, accounting, and financing.



ACCOUNTING I IP CN: BA30

Grades 9-12 36 wks. 1.0 credit
All Levels

In Accounting I, emphasis is placed on the process for organizing financial information through the use of the double-entry accounting system. Study covers the basic accounting equation through the complete accounting cycle for both a service and a merchandising business. This is an essential course for anyone who is considering any area of business – whether in college or in the work place.



ACCOUNTING II, HONORS IP CN: BA40

Grade 10, 11 or 12 36 wks. 1.0 credit
Honors Level
Prerequisite: Accounting I

Accounting II expands on the fundamental concepts and principles of Accounting I. Study begins with a complete review of the accounting cycle for a merchandising business organized as a corporation. Accounting procedures for asset, liability, and equity accounts are covered as well as analyzing financial statements.

**BUSINESS
MANAGEMENT/MARKETING
IP, VB
CN: BM40**

Grades 9-12 36 wks. 1.0 credit
All Levels

This full-year course will enable students to: 1) acquire a working vocabulary of common business terms; 2) obtain an awareness of the many activities, problems, and decisions involved in successfully operating a business; 3) gain an appreciation of the importance of business, management, and marketing in our economic system.

**BUSINESS LAW
IP, VL
CN: BB30**

Grade 10, 11, or 12 18 wks. 0.5 credit
All Levels

This one-semester course is a survey of American law and our rights and responsibilities as individuals in our society. Topics covered include: criminal and civil law, contracts, family law, and the juvenile justice system. Consumer topics such as buying and insuring a car, marriage, renting an apartment, and real and personal property are also covered.

**YEARBOOK/MARKETING I
DESIGN, PROMOTION, AND DISTRIBUTION
IP
FALL - CN: BY31**

Grades 9-12 18 wks. 0.5 credit
All Levels

This class produces the high school yearbook. The yearbook serves as the real-world learning laboratory for this Marketing I course. Students are exposed to the functional areas of marketing and marketing technology including product design, price, place, promotion, and distribution. The

emphasis of this course will continue to develop students' problem-solving skills, logic, processes, and communication skills.

**YEARBOOK/MARKETING II
LAYOUT, SALES AND BUDGET
IP
SPRING - CN: BY32**

Grades 9-12 18 wks. 0.5 credit
All Levels

This class produces the high school yearbook. The yearbook serves as the real-world laboratory for this Marketing II course. Students are exposed to the basic areas of marketing and marketing technology including sales, accounting, budgeting, and marketing technology. This course follows the NBEA and Pennsylvania Department of Education standards.

**PERSONAL FINANCE
IP, VB
CN: BP30**

Grade 10, 11, or 12 36 wks. 1.0 credit
All Levels

The Personal Finance course explores people's money habits and how those habits affect their lives. The course will cover the following topics: Managing Your Money, Budgeting & Record Keeping, Checking, Savings, Investing, The Stock Market, and Credit. Throughout the course, students will participate in realistic simulations in which they must decide on what to do with their money.

NOTES

COMPUTER APPLICATIONS & PROGRAMMING

INSTRUCTIONAL MODE KEY

IP: In-person

VB: Virtual Blended

VL: Virtual Live



COMPUTER APPLICATIONS I

IP

CN: BC10

Grades 9-12 18 wks. 0.5 credit
All Levels

This course is designed to familiarize students with computer applications using the Microsoft Office 2013 suite. It covers a brief history of computers, windows applications, word processing, data base, spreadsheet and presentation software. Instruction and projects are focused on the operation of a personal computer using a “hands-on” approach. Students will also learn how to apply their computer skills for other classes and in their daily lives.



COMPUTER APPLICATIONS II

IP

CN: BC20

Grades 9-12 18 wks. 0.5 credit All Levels
Prerequisite: Computer Applications I

This advanced course will provide students with additional computer knowledge and skills students need to effectively utilize Microsoft Office. Students will utilize Publisher and PowerPoint as well as explore advanced database techniques in Access and advanced spreadsheet techniques in Excel. Instruction and projects focused on the operation and utilization of the applications as well as the application of the skills to their daily lives.



INTRODUCTION TO PROGRAMMING

IP, VB

CN: BA10

Grades 9-12 18 wks. 0.5 credit
All Levels

This Introduction to Programming class is intended to give students a first look at programming. No previous programming experience or exposure is required. This class is designed for a one-semester and will cover introductory programming topics such as methods, objects, events, algorithms, logic, animations, movies, games, text, sound, and graphics.



WEB PUBLISHING

IP

CN: BP10

Grades 9-12 18 wks. 0.5 credit
All Levels

Web Publishing is a basic introductory course that will expose students to creating websites in MS Expression Web and HTML. Students will learn web page design techniques as well as the fundamentals of developing a website using an application (Expression Web) versus code (HTML). This course is intended for beginning web site creator and not for students with advanced application or html coding experience.



**INTRODUCTION TO
JAVA PROGRAMMING
IP, VB
CN: CM40**

Grades 9-12 18 wks. 0.5 credit
Average/Above Levels
Prerequisite: Algebra I

This course provides an introduction to JAVA programming and object-oriented application development. It is intended for beginning programming students in computer science or computer information systems. Fundamentals of JAVA and decision making with methods and classes will be covered.



**INTERMEDIATE JAVA PROGRAMMING
IP
CN: CM50**

Grades 9-12 18 wks. 0.5 credit
Average/Above Levels

Prerequisite: Introduction to JAVA Programming

This course will continue to teach students the principles of computer programming with JAVA. Advanced topics will be covered, including graphical user interfaces, object-oriented programming.

**PROGRAMMING with C++
IP
CN: CM20**

Grades 9-12 18 wks. 0.5 credit
Average/Above Levels

This course provides an in-depth look at programming in the C++ language. C++ is the foundation for video games, engineering projects, and is a requirement for many college Computer Science majors. This course will provide the solid fundamentals in object-oriented programming, and continue to demonstrate those principles through discussing topics including variables, selection,

repetition, arrays, inheritance, and event-driven programming.

**PROGRAMMING WITH PYTHON
IP
CN: CM10**

Grade 10-12 18 weeks 0.5 credit

This course will introduce students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. Students who take this course will be prepared to be successful in the AP Computer Science A class and continue their study of computer science and its integration into a wide array of computing and STEM-related fields.

**A.P. COMPUTER SCIENCE A
IP
CN: CM70**

Grade 11 or 12 36 wks. (5pd./wk.) 1.0 credit
Advanced Placement

*Prerequisite: Intro to Programming with Java
Programming AND Intermediate Java Program*

The AP Computer Science A course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design. Students who take the AP computer Science

course and exam are well prepared to continue their study of computer science and its integration into a wide array of computing and STEM-related fields.

**A.P. COMPUTER SCIENCE PRINCIPLES
IP
CN: CM60**

Grade 11 or 12 36 wks. (5pd./wk.) 1.0 credit
Advanced Placement
Prerequisite: Passed Algebra I

AP Computer Science Principles is designed to introduce 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. This rigorous course promotes deep learning of computational thinking skills, and engages students in the creative aspects of the field. It is unique in its focus in fostering students to be creative. Students are encouraged to apply creative processes when developing computational artifacts and to think creatively while using computer software and other technology to explore questions that interest them. They will also develop effective communication and collaboration skills, working individually and collaboratively to solve problems, and discussing and writing about the importance of the problems and the impacts to their community, society, and the world.

NOTES

ENGLISH

INSTRUCTIONAL MODE KEY

IP: In-person

VB: Virtual Blended

VL: Virtual Live

ENGLISH 4.0 credits Required for Graduation

English 9 (Required, 1 credit)
English 10 (Required, 1 credit)
English 11 (Required, 1 credit)
English 12 (Required, 1 credit)

As outlined in the current English curriculum guide for grades 9-12, students will follow a prescribed course of study that encompasses literature, grammar, writing, listening and speaking activities appropriate to grade and course difficulty level.

The current curriculum has been developed in order to instruct and assess the following Pennsylvania Academic Standards:

Learning to Read Independently
Reading Critically in All Content Areas
Reading, Analyzing and Interpreting Literature
Types of Writing Quality
of Writing Speaking and
Listening
Characteristics and Functions of the English Language
Research

In addition, English classes in grades 9-11 will administer the CDT Testing to assess student performance in reading to better tailor the needs of students in each class to achieve improved performance in not only language arts but also on the Keystone Literature Exam.

Teachers in all grades will also administer and assess at least one multi-paragraph writing assignment per semester using the domain scoring rubric.

As students enter the senior high school, course options expand to include Advanced Placement level courses, which are designed to meet national curriculum standards as established by The College Board, and which are to reflect college-level difficulty. Courses continue to be offered at English, Academic, and Honors, levels.

Beginning with the graduating class of 2014, each student must demonstrate proficiency in English Language Arts and mathematics on the Keystone Exams, which will replace the Pennsylvania System of School Assessment (PSSA), or provide evidence of proficiency in English Language and mathematics through state-mandated alternative forms of assessment. Students will take the Keystone Exams upon completion of the corresponding courses.

ENGLISH 9

IP, VB
CN: EB10

Grade 9 36 wks. 1.0 credit
Basic Level

This course will continue to build upon the reading and writing skills addressed in English Language Arts 8 with an emphasis on application of the skills in various genres of both fiction and nonfiction texts. This course is best suited for the learner who needs reinforcement of fundamental skills already learned. Course content mirrors that of Academic 9, but may require more scaffolding of the concepts and may move at a slower pace. Emphasis is placed on the skills needed to become proficient readers and writers and to be successful on the Keystone Literature Test administered in tenth grade.

ENGLISH 9, ACADEMIC
IP, VB
CN: EA10

Grade 9 36 wks. 1.0 credit
Average Level

This course presents a variety of literary genres, with a special concentration on the novel, nonfiction, and short story. Also included are an introduction to Shakespearean drama with emphasis on literary analysis, communication skills, and library research skills. Throughout the course, the student will write text dependent analysis essays and paragraphs to help prepare for the Keystone Literature exam.

ENGLISH 9, HONORS
IP, VB
CN: EH10

Gifted: EH15

(Gifted enrollment is limited to students in the Gifted Program and must be approved by Gifted Coordinator/GIEP)

Grade 9 36 wks. 1.0 credit
Honors Level

It is recommended that students have a "B" average or higher in Honors ELA 8 and a teacher recommendation

Students will concentrate on comprehending and analyzing various genres of fiction including: short stories, drama, novels, poetry, and mythology. In addition to the intensive literary study, students will focus on writing MLA formatted thematic and character analysis papers with supported textual evidence. Students will also focus on comprehending, analyzing, and applying nonfiction primarily through writing the MLA research paper. Library research skills are integrated into this course. Please note, a summer reading project is required.



INTRODUCTION TO MEDIA COMMUNICATIONS
IP, VL
CN: EC10 (Fall Semester)

Grade 9 18 wks. 0.5 credit
Average/Above Levels

NOTE: TECH PREP STUDENTS ONLY OR BY APPROVAL OF COLLEGE TECH PREP COOR.

This course will cover the history of the various electronic forms of mass communications media and their impact on today's society. It will also include the application of basic skills and terms used in the productions of electron media. This class will be required for CTP Broadcast Communications students.



ENGLISH 10
IP, VB
CN: EB20

Grade 10 36 wks. 1.0 credit
Basic Level

Prerequisite: Admission to Basic Level Courses

This course stresses the introductory approach to literature and paragraph writing begun in ninth grade. The course work revolves around reading comprehension and the writing of paragraphs. **Students in this course are required to take the end-of-course Keystone Literature Exam.**

ENGLISH 10, ACADEMIC
IP, VB
CN: EA20

Grade 10 36 wks. 1.0 credit
Average Level

This course combines writing and literary analysis, investigating the genres of poetry, fiction, drama, and nonfiction. The student works toward correctness in the conventions of writing, and improvement in organization. **Students in this course are required to take the end-of-course Keystone Literature Exam.**

ENGLISH 10, HONORS
IP, VB
CN: EH20
Gifted: EH25

(Gifted enrollment is limited to students in the Gifted Program and must be approved by Gifted Coordinator/GIEP)

Grade 10 36 wks. 1.0 credit
Honors Level

Suggested: "B" average in Honors English 9

Students study the major works of world literature, in relation to their historical contexts and discover the elements that connect the works. The writing focus is on paragraph development and research, culminating in a documented term paper in MLA format.

Students in this course are required to take the end-of-course Keystone Literature Exam.

JOURNALISM I
CN EJ30
IP, VL

Grade 9, 10, 11 18 wks. 0.5 credit
Average/Above Levels

Students with a strong interest in writing should consider this course. During Journalism I, students will concentrate on the process of journalistic methods including: journalistic laws and ethics, interviewing skills, Associated Press writing style, layout and design, advertising, and research. The areas of sports, news features, and opinion writing will be reviewed. In addition, students will examine professional newspapers and present current event projects.

ENGLISH 11
IP, VB
CN: EB30

Grade 11 36 wks. 1.0 credit
Basic Level

Prerequisite: Admission to Basic Level Courses

This course focuses on the development of reading skills. The study of writing skills will also be a focus, and include an emphasis on the writing process and application of these skills in students' own work. Reading skills are improved in correlation with writing skills through the use of various texts of the American Literature genre. Reading skills are further developed through the use of targeted CDT testing to enhance students' skills of comprehension, vocabulary, analysis, etc.

ENGLISH 11, ACADEMIC
IP, VB
CN: EA30

Grade 11 36 wks. 1.0 credit
Average Level

This course emphasizes the skills associated with critical reading, single and multi- paragraph writing, and research. Students read fiction and non- fiction from selected American writers. Students also review the elements of grammar and the writing process while constructing paragraphs and essays.

ENGLISH 11, HONORS
IP, VB
CN: EH30

Grade 11 36 wks. 1.0 credit
Honors Level

Recommended: "A" in English 10, Average "A" or "B" in English 10, Honors and proficiency on the Keystone Literature Exam

In this course, students look at the development of American Literature, studying the major writers and literary movements. Students utilize different strategies for critically reading a text,

working to extend the student’s ability to read both for surface level content information to deeper textual analysis. Finally, students also work to improve and refine writing and research skills in preparation for college-level experiences.

**A.P. ENGLISH LANGUAGE & COMPOSITION
IP, VB
CN: EH50
Gifted EH55**

Gifted Enrollment is Limited to Students in the Gifted Program and must be approved by Gifted Coordinator/GIEP

Grade 11 36 wks. 1.0 credit
Advanced Placement

*Prerequisite: Proficiency on the Keystone Literature Exam and teacher recommendation
Recommended: “A” or “B” in English 10, Honors*

In this highly challenging course, students trace the development and characteristics of American Literature. Students sharpen formal rhetoric skills through essay assignments, library research, and documented writing. Knowledge of the *MLA Handbook* is expected. **Summer reading and writing assignment completion are a course requirement.**

**ENGLISH 12
IP, VB
CN: EB40**

Grade 12 36 wks. 1.0 credit
Basic Level

Prerequisite: Admission to Basic Level Courses

Emphasis is placed upon reading and writing skills and on the application of these skills in students’ own work. Reading skills are improved in correlation with writing skills through the use of fiction and non-fiction works. Reading skills are developed through explicit practice to enhance students’ skills of comprehension, vocabulary, summarization, and analysis.

**ENGLISH 12, ACADEMIC
IP, VB
CN: EA40**

Grade 12 36 wks. 1.0 credit
Academic Level

This course reviews and builds upon the skills developed in English 11 Academic. Students read works from British authors, and further develop writing and research skills. Learning occurs through a connected process of instruction and application in order to prepare students for college or entrance into the workforce.

**ENGLISH 12, HONORS
IP, VB
CN: EH40**

Grade 12 36 wks. 1.0 credit
Honors Level

Prerequisite: “A” in English 11, Academic or “A” or “B” in English 11, Honors

Students in this course explore the development of British literature, studying major writers and literary forms in each historical period. Students also work, through varied assignments, to improve writing and research skills as preparation for college level experiences.

**A.P. ENGLISH LITERATURE & COMPOSITION
IP, VB
CN: EH60
Gifted EH65**

Gifted Enrollment is Limited to Students in the Gifted Program and must be approved by Gifted Coordinator/GIEP

Grade 12 36 wks. 1.0 credit
Advanced Placement

*Prerequisite: Teacher recommendation
Recommended: “A” or “B” in English 11 AP, or Honors*

This course is for students with strong interests in reading, discussion, and analysis of literature.

Summer reading and writing is required.

Emphasis is placed upon written responses to analytic questioning based upon close reading of major British authors. Proficiency and mastery of the *MLA Handbook* protocols is expected. Students refine their writing and analytical skills by completing research projects while applying critical thinking skills.



**JOURNALISM
IP
CN: EJ40**

Grade 10, 11, or 12 36 wks. 1.0 credit
All Levels

The main objectives of this course are the production of the Senior High School newspaper, *Skyliner*, and maintaining the official *Skyliner* website. Students will write news stories and features, create photographs, and sell advertising.



**TV/VIDEO PRODUCTION, PART I
IP
CN: ER31**

Grades 9-12 18 wks. 0.5 credit
Average/Above Levels

Students will learn the behind-the-scenes operations of TV/Video Production. Basic aspects of pre-production and production will be explored including concept development, scripting, and storyboarding. Emphasis will be placed on elements of the camera, shot composition, and editing.



**TV/VIDEO PRODUCTION, PART II
IP
CN: ER32**

Grades 9-12 18 wks. 0.5 credit
Average/Above Levels

Prerequisite: TV/Video Production, Part I Students in this course are required to participate in work outside of the regular school day.

This course is a natural continuation of TV/Video Production, Part I. Students will primarily focus on the production of the BTTV News Magazine Show. Students will write, film, and edit news packages for on-air use. Documentary filmmaking will be a focus during the second half of the term.

**BTTV PRODUCTION
IP
CN: ER61 (Fall) CN:
ER62 (Spring)**

Grades 9-12 18 wks. 0.5 credit
Average/Above Levels

Prerequisite:

1. TV Production class experience preferred
2. "B" average grade in prior TV Production classes
3. Endorsement by IHS or SHS TV/Communications teacher
5. Principal has final determination on class roster.

Students are responsible for the production of the Senior High School's morning announcement show. Students will learn the skills necessary to operate broadcasting equipment behind the scenes and act as on-air anchors for the daily show. Students will also create weekly features to run on the morning show.



**ADVANCED TELEVISION PRODUCTION
IP
CN: ER42**

Grade 11 or 12 18 wks. 0.5 credit
Average/Above Levels

Prerequisite: TV/Video Production, Parts I and II Students in this course are required to participate in work outside of the regular school day

This course is a natural continuation of TV/Video Production, Part II. Students will learn about all elements of film production and history. Well-known films will be analyzed as a method of studying effective filming and writing techniques. Students will be responsible for writing, producing, filming, directing, and editing a short narrative film.



RADIO PRODUCTION
IP
CN: ER50

Grades 9-12 18 wks. 0.5 credit
Average/Above Levels

This course looks at the basic principles of recording sound, producing radio spots, and performing a format program. Students will be expected to prepare for and host a live radio show, within station guidelines, on a regular basis.

BC3 COLLEGE WRITING
IP
CN: EW35

Grade 11 or 12 18 wks. 0.5 credit
Prerequisite: 3.0 overall GPA

This is a dual enrollment course offered in conjunction with Butler County Community College. This course stresses the writing process of planning, organizing, drafting, revising, and editing multiple paragraph essays. Methods of invention, types of development, and the mechanics of effective academic composition are included as well as discussion of plagiarism and source documentation.

BC3 COLLEGE RESEARCH
IP
CN: EW40

Grade 11 or 12 18 wks. 0.5 credit

Prerequisite: 3.0 overall GPA and BC3 College Writing

This is a dual enrollment course offered in conjunction with Butler County Community College. The emphasis of this course is upon persuasion, evaluation, research, and writing the research paper. Students will continue the study and writing of thoughtful and organized expositions as well as careful editing of grammar and sentences.

Students will be required to purchase their own textbook from the BC3 bookstore.

Students must register and pay for this course prior to being scheduled. (Approximate Cost \$400 per 3 credit hours) See the guidance office for details.

INTRO TO COMMUNICATIONS & SPEECH
VB
CN: ES30

Grades 9-12 18 wks. 0.5 credit
Average/Above Levels

Beginning with an introduction that builds student understanding of the elements principles, and characteristics of human communication, this course offers fascinating insight into verbal and nonverbal messages and cultural and gender differences in the areas of listening and responding. High school students enrolled in this one-semester course will be guided through engaging lectures and interactive activities, exploring themes of self-awareness and perception in communication. This course concludes with units on informative and persuasive speeches, and students are given the opportunity to critique and analyze speeches.

Contemporary/Young Adult Literature
CN: EY30

Grades 9-12 36 wks. 1.0 credit

The course will move beyond the classics into the modern era of literature to foster a newfound passion and respect for reading or bolster existing habits. In addition to embarking on a myriad of fictional adventures, throughout the course, students will engage in vibrant discussion and debate, tackle a variety of unique and innovative writing styles, and learn new critical thinking and analysis techniques. These objectives will be measured through a myriad of larger projects, such as creative writing assignments and character/scene enactment, as

well as smaller in-class checkpoints like reader responses, journaling, discussions, and reviews. This course will promote life-long reading habits in its students. The teacher will select and assign several whole-class or small-group novels throughout the semester, and students will also participate in independent reading with novels of choice. At the beginning of the semester, students will be required to have their parent or guardian sign a reading permission waiver dictating what novels will be covered with descriptions of each. Students will not be able to take the course without submitting the waiver.

PUBLIC SPEAKING

IP

CN: EP30

Grades 9-12 18 wks. 0.5 credit

This semester elective will provide students the opportunity to learn about verbal and nonverbal communication skills and how to alleviate stage fright. The course will have an emphasis on the preparation and delivery of a public speech. The focus of the course is speaking to inform, persuade and entertain. The class will also explore rhetorical strategies for creating arguments and debate.

FAMILY AND CONSUMER SCIENCE

INSTRUCTIONAL MODE KEY

IP: In-person

VB: Virtual Blended

VL: Virtual Live



FAMILY & PRENATAL DEVELOPMENT IP, VB CN: FC10

Grades 9-12 18 wks. 0.5 credit
All Levels

*Requirement for Child Development CTP Students
Open to Non-CTP Students*

This course is designed to give students insight into responsible decision making concerning family situations, pregnancy, and child development. Topics deal with families, parenthood, pregnancy, labor and delivery, and the physical, social, emotional, and intellectual development of newborns.



INFANT & TODDLER DEVELOPMENT IP, VB CN: FC20

Grades 9-12 18 wks. 0.5 credit
All Levels

Requirement for Child Development CTP Students

This course will focus on what to do with infants and toddlers: how they grow, how they learn, and how they interact. Topics such as theories of development, normal growth and development, discipline, and nutrition will be covered.



EARLY CHILDHOOD DEVELOPMENT IP, VB CN: FC30

Grades 9-12 18 wks. 0.5 credit
All Levels

No prerequisite; however, Family & Prenatal and Infant & Toddler are highly recommended.

This course focuses on the study of children from three years to eight years of age and children with special needs. Issues such as educational theorists and developmentally appropriate activities are discussed. Observation skills are introduced with two days of job shadowing/observation of preschoolers and children with special needs being required. Child Development Associate- Ready Certificate and Pennsylvania Keystone Star requirements for child care providers are introduced. Several community service projects are part of this class experience. Anyone interested in teaching with preschoolers or elementary aged level children would be interested in this class. You do not have to be part of CTP to take this class.



ADOLESCENT DEVELOPMENT IP, VB CN: FC40

Grades 9-12 18 wks. 0.5 credit
All Levels

No prerequisite; however, Early Childhood Development is recommended

This course focuses on the study of adolescents and is designed for those interested in working with them. Issues such as adolescent development, education

theorists, teaching and learning styles, children with special needs are discussed. Observation skills, subject area academic standards are introduced. Those students interested in social work, psychology, or teaching upper elementary or secondary education would benefit from this class. You do not have to be part of CTP to take this class.



**CHILD DEVELOPMENT/FIELD
EXPERIENCE
IP, VB
CN: FC52 (Spring Only)**

Grades 11 or 12 18 wks. 1.0 credit
All Levels

Prerequisite: Early Childhood Development or Adolescent Development are required before taking this class.

This is a blended learning experience. A portion of this class is online. Students will be scheduled for a Study Hall. Students will work independently and with the teacher to complete all requirements. The Study Hall will serve as class time where students can work on their online assignments, activities, and tests.

This course is designed to study teaching methods in a variety of subject areas. Various strategies used to teach children from preschool to early adolescence are discussed. The highlight of this course is an active participation experience in an early childcare setting, primary elementary, or junior high setting where our students get “hands-on” experience with working with students in real classrooms under the direction of real teachers. The students are required to provide their own transportation during their field experience. Child Development Associate-Ready competencies, a daily experience log, lesson plan booklet, and a planned unit become an integral part of the student portfolio. This is a hands-on experience that allows the students the opportunity to gain experience in the field of Child Development.

Please refer any questions about this blended course to Mrs. Kelly Erdos ext. 5278 or Shannon McGraw in the Guidance Office.

**INTERIOR DESIGN
IP, VB
CN: FI10**

Grades 9-12 18 wks. 0.5 credit
All Levels

In this course, students learn the principles and elements of design and how to apply them into a workable room. Practical application projects include working with color, pattern, texture and backgrounds. Students also learn how to draw a floor plan and use it to arrange furniture.

**FALL SEASONAL CRAFTS
IP
CN: FN31**

Grades 9-12 18 wks. 0.5 credit
All Levels

This is a course for all students interested in basic crafting skills. Craft projects are geared towards the seasons of fall and winter. Crafts range from basic sewing, knitting, needle point, and DIY projects. Create for yourself or others. Students are responsible for paying for some of their own supplies.

**SPRING SEASONAL CRAFTS
IP
CN: FN32**

Grades 9-12 18 wks. 0.5 credit
All Levels

This is a course for all students interested in basic crafting skills. Craft projects are geared towards the seasons of spring and summer. Crafts range from basic sewing, crocheting, needle point, and DIY projects. Create for yourself or others. Students are responsible for paying for some of their own supplies.

COOKING 1: COOKING AND BAKING BASICS
IP
CN: FD30

Grades 9-12 18 wks. 0.5 credit
All Levels

This course is designed for any student with no prior cooking experience. In this class, you will learn how to work efficiently in the kitchen while preparing simple recipes. The emphasis is on basic cooking skills, and cooking methods used within the kitchen to achieve success when reading a recipe. Measuring, cutting, recipe reading, and nutritional techniques are all addressed.

COOKING 2: NOW THAT YOU CAN COOK
IP
CN: FD40

Grades 9-12 18 wks. 0.5 credit
All Levels

Prerequisite: Cooking 1: Cooking and Baking Basics

This course is designed for students who have taken a cooking course prior to this class. This class focuses on higher level cooking skills, recipe reading, and meal preparation. The emphasis in this class is on meal preparation with a focus on breakfast, lunch, and dinner meal planning along with preparation techniques to be more productive when preparing meals. Other topics covered are nutrition and baking.

COOKING 3: COOKING FOR EVERY OCCASION
IP
CN: FD50

Grades 10-12 18 wks. 0.5 credit
All Levels

Prerequisite: Cooking 1: Cooking and Baking Basics and/or
Cooking 2: Now That You Can Cook

This course is designed to be an in-depth study of meal planning, preparation, and presentation. The emphasis of this class is to build upon previously learned cooking and preparation skills to enhance the students understanding and awareness of meal preparation. Other topics addressed are party planning, group meal planning, and holiday baking.

LEVELLED UP COOKING
IP
CN: FD60

Grades 11 or 12 18 wks. 0.5 credit
All Levels

Prerequisite: Cooking 2 and/or Cooking 3

The main focus of this course is for students to understand and be able to perform the four main cooking methods. Students will learn and implement moist-heat cooking, cooking in fat, dry-heat cooking, and convenient cooking methods. Students will be proficient in their use of kitchen and outdoor equipment included but not limited to the oven, stove top, microwave, air fryer, toaster oven, and grill. This course will focus on Food safety and sanitation, using a recipe, preparation techniques, and the cooking methods. Students will learn to research, budget for, and prepare recipes with meal preparation in mind. This is our highest level of cooking course and requires that you have previous cooking experience in one of our other courses.

ON YOUR OWN
IP, VB
CN: FO30

Grades 11, 12 18 wks. 0.5 credit
All Levels

This course is highly recommended to all students especially graduating seniors. The course will focus on exploring all aspects of adult life such as: personality development, healthy communication skills, relationships with family and friends, mate selection and marriage. This course also prepares students for life after high school focusing on

how to make informed decisions such as purchasing a car, selecting an apartment, banking and establishing credit, finding a job, and filling out income tax turns. Students will practice dealing with future responsibilities in a positive, effective way.

**CO-OP
IP
CN: Fall: TCP3
Spring: TCP4**

Grades 10, 11, 12 18 wks. 0.5 credit
All Levels

This course is designed for students who would like to enter the workforce. It will encompass topics such as career awareness and preparation, career acquisition (getting a job), career retention, and advancement and entrepreneurship. Students have an opportunity to apply their academic, technical, and interpersonal skills to a work-based learning experience, including job shadowing, site visits, pre-apprenticeships and mock interviews all leading to possible employment.

NOTES

HEALTH/PHYSICAL EDUCATION

INSTRUCTIONAL MODE KEY

IP: In-person

VB: Virtual Blended

VL: Virtual Live

Health Ed 0.5 credit required for graduation
Physical Ed .25 credit required in
Grades 9, 10, 11, and 12 for graduation

CPR/FIRST AID

IP
CN: PC20

Grades 10, 11, or 12 18 wks. 0.5 credit
All Levels

NOTE: Does not fulfill graduation requirements for Health

Due to the rising costs from the American Red Cross, students that want to be certified with cards will be charged a fee to cover the American Red Cross Service Fee.

This course is based on American Red Cross First Aid and CPR programs. The content of the course includes adult, child, and infant rescue breathing, choking rescue, CPR, basics. Certification is possible for each class. There will also be information about how to live heart healthy lives, how to protect yourself from infectious disease, and up-to-date information concerning drugs, society, and behavior.

COMPREHENSIVE PERSONAL HEALTH

IP, VB
CN: PH20

Grades 9-12 18 wks. 0.5 credit
All Levels

This course is to be taken one time between 9th and 12th grade. Beginning with the class of 2020-2021 school year, all 9th graders will be scheduled into Comprehensive Personal Health

This course will provide a program of health instruction designed for students to evaluate their current health behaviors and attitudes. It will build health skills such as goal setting, decision making, stress and mental health management, fitness, and nutrition. This program also features up-to-date information on HIV/AIDS; drugs and substance abuse; the cost of addiction, both personally and to society; and the impact of drugs on the family.

LIFEGUARDING

IP
CN: PLG0

Grades 9-12 18 wks. 0.25 credit
All Levels

Note: Fulfills P.E. graduation requirement

Due to the rising costs from the American Red Cross, students that want to be certified with cards will be charged a fee to cover the American Red Cross Service Fee.

This course is based on the American Red Cross Lifeguarding Course. Certification is not a requirement for passing this Physical Education elective. Students who elect this course will be evaluated on: swimming rescue skills, back boarding, CPR for the professional rescuer and First Aid skills. This class will meet in the pool and classroom areas. Students will be expected to fulfill all American Red Cross skill requirements for both physical skills and written tests to be certified as a Lifeguard.

AQUATICS
IP
CN: PAQ0

Grades 9-12 18 wks. 0.25 credit
All Levels

Note: Fulfills P.E. graduation requirement

This coeducational course is taught in compliance with The American Red Cross, Pennsylvania Fishing and Boating Commissions, and the PIAA Swimming and Diving Rules and Regulations. The course will also emphasize personal and aquatic safety. The student must have a strong swimming background. Students will be given instruction experience in the pool area. Special programs offered will be in open water, canoeing, kayaking, American Red Cross water safety and competitive swimming, diving and water polo. This course will be for Physical Education credit.

LIFETIME AND LEISURE SPORTS
IP
CN: PLLO

Grades 9-12 18 wks. 0.25 credit
All Levels

Note: Fulfills P.E. graduation requirement

This class is designed to provide an opportunity for students with a desire to engage in less strenuous activities and lower level of skill background. The class will emphasize more of a cognitive assessment of activities as opposed to demonstration of skills. The fitness components of muscular strength, muscular endurance, flexibility, and cardiovascular endurance will be a regular part of the class.

STRENGTH & CONDITIONING
IP
CN: PSC0

Grades 9-12 18 wks. 0.25 credit
All Levels

Note: Fulfills P.E. graduation requirement

This course is for physical education credit. This class is designed for students who enjoy training and those who are involved in the sports teams for the school. Students should have knowledge of weight training and should also understand concepts of fitness workouts. Students would be training for their sports seasons by lifting, working on core, footwork, flexibility. Students would be monitored through workout charts and participation. This class would meet at the stadium annex every day.

TEAM AND INDIVIDUAL SPORTS
IP
CN: PTS0

Grades 9-12 18 wks. 0.25 credit
All Levels

Note: Fulfills P.E. graduation requirement

This class is designed to provide an opportunity for student who may or may not have a strong background in a variety of sports activities, but the student has an interest in improving skills and fitness levels. This student does not desire high-intense competition, but he or she still enjoys the participation in team and individual sports. The fitness components of muscular strength, muscular endurance, flexibility, and cardiovascular endurance will be emphasized and tested regularly.

ADVANCED TEAM AND INDIVIDUAL SPORTS
IP
PTSS

Grades 9-12 18 wks. 0.25 credit
All Levels

Note: Fulfills P.E. graduation requirement

This class is designed to provide an opportunity for students who have a background in a variety of sports activities. Students should be able to demonstrate basic sports skills at a proficient level. Student has a background of game strategies. This class is designed for the competitive person, who enjoys playing games

with a higher intensity. The fitness components of muscular strength, muscular endurance, flexibility, and cardiovascular endurance will be emphasized and tested regularly.

**PHYSICAL EDUCATION ONLINE
VB
PEOL**

Grades 9-12 18 wks. 0.25 credit
All Levels

Note: Fulfills P.E. graduation requirement

Butler Area Schools offer the opportunity of Cyber Physical Education whether it be through Summer PE or the four Edgenuity courses offered during the school year. The Edgenuity Physical Education program you enroll in may take you on a journey on how the body responds to physical exercise, what body systems are involved, and why physical fitness is important to your health. In some of the programs you may learn about exercising safety and techniques, setting goals and sportsmanship. Within every program you will be required to complete a weekly fitness log. This log is part of your grade. The Edgenuity courses will be accepted as a Physical Education credit.

NOTES

JUNIOR ROTC LEADERSHIP DEVELOPMENT

INSTRUCTIONAL MODE KEY

IP: In-person

VB: Virtual Blended

VL: Virtual Live

LEADERSHIP I

IP

CN: JR11 (Fall)

CN: JR12 (Spring)

Grade 9, 10, 11 36 wks. 1.0 credit
All Levels

This course covers introduction to JROTC, leadership theory, drill and ceremonies, hygiene and first aid, map reading, techniques of oral communications, cadet challenge (physical training and testing), and an introduction to Leadership II. These instructions are on an introductory level and are supplemented by the Instructor's optional subjects, which are selected to motivate and expand the academic and vocational aspects of the cadets.

LEADERSHIP III

IP

CN: JR30

Grade 11 or 12 36wks. 1.0 credit
All Levels

This course covers applied leadership, drill and ceremonies, map reading, land navigation, techniques of oral communication, service and ROTC opportunities, and cadet challenge (physical training and testing). The Instructor's optional subjects are taught to expand upon the previous skills and knowledge learned during Leadership I and II and to emphasize hands-on or performance-type instruction.

LEADERSHIP II

IP

CN: JR20

Grade 10, 11, 12 36 wks. 1.0 credit
All Levels

Prerequisite: Leadership I

This course covers intermediate leadership, drill and ceremonies, first aid, map reading, techniques of oral communications, drug, alcohol, and tobacco abuse, service and Senior ROTC opportunities, cadet challenge (physical training and testing), and an introduction to Leadership III. Instruction of material is at an intermediate level and builds upon previous instruction. Selected Instructor's subjects are also included to cover timely topics and build leadership motivation

LEADERSHIP IV

IP

CN: JR40

Grade 12 36wks. 1.0 credit
All Levels

This course covers advanced leadership techniques, drill and ceremonies, staff functions and procedures, advanced communications, and the cadet challenge (physical training and testing). The Instructor's optional subjects are taught to expand on other subject areas, cover timely topics of interest, allow for guest speakers, and cover opportunities available after graduation.

RECOMMENDED MATH PACING CHART

GRADE 8-12

This chart represents the most commonly recommended course sequences in the math program; however, students may select an alternative course.

	SEQUENCE I	SEQUENCE II	SEQUENCE III	SEQUENCE IV	SEQUENCE V
8th Grade	Pre-Algebra	Algebra I Part I	Algebra I*	Algebra I	Geometry
9th Grade	Algebra I Part I	Algebra I Part II	Algebra I*	Geometry or Honors Geometry	Honors Algebra II
10th Grade	Algebra I Part II*	Keystone Algebra and/or Geometry	Keystone Algebra or Geometry	Algebra II or Honors Algebra II	Honors PreCalculus
11th Grade	Keystone Algebra and/or Geometry	Geometry or Intro to Tech Math or Algebra II	Algebra III or Tech Math I Honors PreCalculus and/or Honors or AP Statistics	Algebra III or Tech Math I Honors PreCalculus and/or Honors or AP Statistics	AP Calculus AB and/or Honors or AP Statistics
12th Grade	Geometry or Algebra II or Intro to Tech Math or Algebra III	Intro to Tech Math or Algebra II	Algebra II or Intro to Tech Math or Algebra III or Tech Math I	Algebra III or PreCalculus or AP Calculus AB and/or Honors or AP Statistics	AP Calculus BC and/or Honors or AP Statistics

At the end of 8th grade Algebra I, if a student does not demonstrate proficiency on the Keystone Algebra I Exam, that student must retake Algebra I. At the end of Algebra I or Algebra I Part II taken later than 8th grade, if a student does not demonstrate proficiency on the Keystone Algebra I Exam, that student must enroll in the Keystone Algebra course. In either case, a student may enroll in Geometry concurrently if the Keystone Exam score is in the top quarter of the Basic range and the Algebra I course grade is at least a "B".

MATHEMATICS

INSTRUCTIONAL MODE KEY

IP: In-person

VB: Virtual Blended

VL: Virtual Live

Mathematics 3.0 credits required for graduation *Beginning with the graduating class of 2014, each student must demonstrate proficiency in Algebra I on the Keystone Exams, or provide evidence of proficiency in Literature and Algebra I through state-mandated alternative forms of assessment. Students will take the Keystone Exams upon completion of the corresponding courses.*

*Students in these courses are required to take the end-of-course Keystone Exam.

ALGEBRA I PART I

IP, VB

CN: MA07

Grade 9 36 wks. 1.0 credit

Prerequisite: Math 8 or Pre-Algebra and Teacher Recommendation

This course consists of solving equations and inequalities in one and two variables, functions, linear relationships and systems of linear equations and inequalities. Problem solving techniques and real world applications will be implemented through the course.

ALGEBRA I PART II *

IP, VB

CN: MA08

Grade 10 36 wks. 1.0 credit

Prerequisite: Algebra I Part I

Students will continue through the Algebra I curriculum using problem solving techniques to focus on linear and quadratic functions, coordinate geometry, data analysis, laws of exponents, and polynomial and radical expressions.

KEYSTONE ALGEBRA *

IP, VB

CN: MA18

Grade 10 or 11 36 wks. 1.0 credit

Prerequisite: Algebra I or Algebra I Part II and a score of "Basic" or "Below Basic" on the Keystone Exam

This course is designed to prepare students who have passed Algebra I or Algebra I Part II, but have not reached proficiency on the Keystone Exam. Students will focus on improving Algebra I skills and concepts directly related to the Exam. Students will have two opportunities to take the Exam. Eligible students will be notified.

ALGEBRA I *

IP, VB

CN: MA10

Grade 9, 10, 11, or 12 36 wks. 1.0 credit
Average/Above Levels

Prerequisite: Teacher Recommendation

This is the first course of an academic sequence. Algebra is recommended for those students planning any post-secondary education. This course consists of solving equations and inequalities in one and two variables, polynomials, factoring, laws of exponents, systems of linear equations, and graphing linear equations. Also included is a presentation on rational and irrational expressions and concepts of quadratic equations. Real world applications and verbal problems are stressed. **Students in the course are required to take the end-of-course Keystone Exam.**

ALGEBRA II
IP, VB
CN: MA20

Grade 10, 11, or 12 36 wks. 1.0 credit
Average/Above Levels

Prerequisite: Algebra I and Geometry or Honors Geometry

A continuation of the concepts of algebra including linear, quadratic, polynomial, exponential, logarithmic, radical, and basic rational functions. Graphing procedures will be stressed. Graphing calculators will be used.

HONORS ALGEBRA II
IP, VB
CN: MA30
Gifted: MA35

(Gifted enrollment is limited to students in the Gifted Program and must be approved by Gifted Coordinator/GIEP)

Grade 9 or 10 36 wks. 1.0 credit
Honors Level

Prerequisite: Algebra I and Geometry or Honors Geometry and Proficient or Advanced on the Keystone Algebra I Exam and Teacher Recommendation

This course will include the same content as Algebra II at a faster pace and with more rigorous problems. Additional topics include rational functions, matrices, conic sections, and sequences and series. This course is designed to challenge honors math students. Graphing calculators will be used.

GEOMETRY
IP, VB
CN: MG30

Grades 9-12 36 wks. 1.0 credit
Average Level

Prerequisite: Algebra I

Students will learn the relationships of geometry using deductive and inductive reasoning. Geometric figures, including lines, parallel and

perpendicular lines, angles, angle relationships, triangles, and other polygons, circles, similarity, area, volume and three-dimensional drawings are studied, as well as an introduction to geometric proofs.

HONORS GEOMETRY
IP, VB
CN: MG40

Grade 9 36 wks. 1.0 credit
Honors Level

Prerequisite: Algebra I and Teacher Recommendation and Proficient or Advanced on the Keystone Algebra I Exam

This course will include the same content as Geometry at a faster pace and with more rigorous problems. Additional topics will include right triangle trigonometry, transformations, and detailed proofs.

INTRO TO TECHNICAL MATHEMATICS
IP, VB
CN: MT30

Grade 11 or 12 36 wks. 1.0 credit
Average Level

Prerequisite: Geometry

This course is designed to provide exposure to a variety of mathematical ideas. These ideas will focus on mathematics used in trades and other technical fields. Topics may include trigonometry, basic statistics and finance.

BC3 TECHNICAL MATHEMATICS I
IP
CN: MT35

Grade 11 or 12 36 wks. 1.0 credit
Average/Above Average Levels

Prerequisite: 80% or better in Algebra II or Teacher Recommendation

This course is designed to meet the needs of technology students with an emphasis on applications. Topics include numerical computation with significant digits, fundamental rules of algebra, right triangle trigonometry, vectors, plane and three-dimensional geometry, oblique triangles, polynomials, graphs and functions, linear equations, systems of linear equations, and variation.

Students will be required to purchase their own textbook from the BC3 bookstore.

Students must register and pay for this course prior to being scheduled. (Approximate Cost \$400 per 3 credit hours) See the guidance office for details.

ALGEBRA III
IP, VB
CN: MA40

Grade 10, 11 or 12 36 wks. 1.0 credit
Average/Above Average Levels

*Prerequisite: Algebra II and Geometry
Consultation with a math teacher is recommended*

This course is designed for the student who completed Algebra II successfully and, want to further their math education. Topics include a more in depth study of a variety of functions with an emphasis on graphing and application, inequalities and the study of trigonometric functions. Graphing calculators will be used.

PRECALCULUS
IP, VB
CN: MC30

Grade 11 or 12 36 wks. 1.0 credit
Average/Above Average Levels

Prerequisite: Algebra III

A continuation of higher algebraic functions, this course includes the study of inverse, rational, polynomial, exponential, and logarithmic functions as well as conic sections, trigonometry, an introduction to calculus including basic limits and derivatives. Graphing calculators may be used.

HONORS PRECALCULUS
IP, VB
CN: MC40
GIFTED: MC45

Grade 10, 11, or 12 36 wks. 1.0 credit
Honors Level

*Prerequisite: Algebra II and Geometry
A or B Student, and teacher recommendation.*

This course includes the study of many functions such as inverse, polynomial, rational, exponential, and logarithmic. The second semester is a comprehensive course of trigonometry including right triangle trig, unit circle trig, and solving trig equations. Conic sections and a brief introduction to calculus are included. Graphing calculators will be used. *A student who is not successful in the first semester of Honors Precalculus may be placed in Algebra III for the second semester.

**HONORS STATISTICS
IP, VB
CN: MS40**

Grade 11 or 12 36 weeks 1.0 credit

Prerequisite: A or B in Algebra II (this is NOT a prerequisite for AP Statistics)

This course is designed to provide exposure to the collection, organization and analysis of data in order to draw meaningful conclusions from the data. This will give students an introductory exposure to statistics in case they need to take in college or simply to encourage them to analyze the vast amounts of data that are given to them on a daily basis, thus creating more educated citizens.

THE FOLLOWING AP COURSES are designed to prepare students for the Advanced Placement examination given in the spring. Course time is devoted to practice tests and preparation for this exam. Students who score well on the AP Exam may earn college credit. Graphing calculators are an integral part of each course. It is HIGHLY SUGGESTED THAT STUDENTS PROVIDE THEIR OWN GRAPHING CALCULATORS.

**A.P. CALCULUS AB
IP, VB
CN: MC50**

GIFTED: MC55

(Gifted enrollment is limited to students in the Gifted Program and must be approved by Gifted Coordinator/GIEP)

Grade 11 or 12 36 wks. 1.0 credit
Advanced Placement

Prerequisite: Honors Precalculus and Teacher Recommendation

Important theorems from algebra, analytic geometry and the theory of functions are reviewed in this course. Included is the study

of derivatives and integrals of algebraic and transcendental functions and applications of derivatives and integrals.

**A.P. CALCULUS BC
IP
CN: MC60**

GIFTED: MC65

(Gifted enrollment is limited to students in the Gifted Program and must be approved by Gifted Coordinator/GIEP)

Grade 12 36 wks. 1.0 credit
Advanced Placement

Prerequisite: A.P. Calculus AB and Teacher Recommendation

This challenging course is a continuation of Calculus AB. There will be a review of Calculus AB topics; however, the main focus of the course will be on the new topics of Calculus BC. These topics include differential and integral calculus, series, parametric and polar equations.

**A.P. STATISTICS
IP, VB
CN: MS50**

GIFTED: MS55

(Gifted enrollment is limited to students in the Gifted Program and must be approved by Gifted Coordinator/GIEP)

Grade 10, 11, or 12 36 wks. 1.0 credit
Advanced Placement Level

*Prerequisite: Algebra II,
A or B Student, Teacher Recommendation*

This course consists of descriptive and inferential statistics. Topics include data collection and description, hypothesis testing, confidence intervals, correlation and regressions, following the College Board Curriculum

NOTES

MUSIC

INSTRUCTIONAL MODE KEY

IP: In-person

VB: Virtual Blended

VL: Virtual Live

MARCHING/SYMPHONIC BAND

IP

CN: NB31 (Fall) NB32 (Spring)

Grades 9-12 36 wks. 1.0 credit

Prerequisite: Audition

This course will offer a more advanced level of musical experiences and cover a wider range of advanced music literature through participation in a variety of ensemble settings. Students will participate in Marching Band during the first 12 weeks and Symphonic Band the remaining 24 weeks. This class includes after school, evening, travel, and Band Camp obligations.

INTRODUCTION TO GUITAR

IP, VL

CN: NG30

Grades 9-12 18 wks. 0.5 credit

Virtual students must have guitar at home

This course is a beginning level class designed for students with little or no previous music

experience. Basic techniques of acoustic guitar playing will be presented, including chordal accompaniment and melodic reading. Students will learn how to read guitar tablature and music notation.

SEQUINETTES

IP

(Fall Only) CN: NS11

Grades 9-12 18wks. 0.5 credit

Prerequisite: Audition

This performance group participates as part of the Marching Band. The class includes after-school, evening, travel, and Band Camp obligations. Students must be selected for the group through audition.

ADVANCED GUITAR

IP

CN: NG40

Grades 9-12 18 weeks 0.5 credit

Prerequisites - They must have taken the Fundamentals of Guitar class we offer or audition.

Students can take this class for one semester or up to eight semesters at the Senior High School.

This class is for students who have some experience and some basic understanding of guitar and want to progress further towards mastery. The prerequisite is to either take the fundamentals of guitar class or pass an audition. Students can take this class for one semester or for all eight semesters at the Senior High School. Here, they will gain advanced skills regarding guitar technique, improvisation, accompanying, solo playing as well as ensemble playing, and students will set their own goals for learning and skill development.

TORNADO VARSITY VOICES
IP
CN: NC51 (Fall) NC52 (Spring)

Grades 9-12 36 wks. 1.0 credit
OR
Grades 9-12 18 wks. 0.5 credit

Prerequisite: Audition

This is an advanced choral ensemble with the student roster determined by either audition or teacher recommendation. It will be a balanced SATB group of students in grades 9-12 that can perform a capella pop and jazz arrangements alongside contemporary and traditional choral repertoire. Rehearsals will be intense yet fun and interactive. Students will learn about vocal technique and will be encouraged to increase their musicianship skills on an ongoing basis. These advanced students will be encouraged to audition for PMEA festivals and for solos within our concert repertoire. This will be a visible group of singers that can perform at school concerts, community events, regional events and adjudication festivals. Teacher signature on the registration form is required. An audition may be required if a music teacher cannot provide a recommendation.

INTRODUCTION TO PIANO
IP, VL
CN: NP30

Grades 9-12 18 wks. 0.5 credit

Virtual students must have piano at home

This course is intended for beginners at the piano, and those who wish to study further can follow it up by taking the advanced piano course. Guided by the instructor, students will work at their own pace, gaining skills at the piano, while learning the theory, technique, music reading skills, and ear training necessary to know how to further hone those skills during and outside of the scope of this course. There are no prerequisites, and students do not need to own a piano or keyboard, as there will be plenty of

practice opportunity during school.

ADVANCED PIANO
IP, VL
CN: NP40

Grades 9-12 18 wks. 0.5 credit
Prerequisite: Audition or Intro to Piano

Virtual students must have piano at home

Students can take this class for one semester or up to eight semesters at the Senior High School.

This class is for students who have some experience and some basic understanding of piano and want to progress further towards mastery. The prerequisite is to either take the introduction to piano class or pass a simple audition. Students can take this class for one semester or for all six semesters at the Senior High School. Here, they will gain advanced skills regarding piano technique, improvisation, accompanying, solo playing as well as ensemble playing, and students will set their own goals for learning and skill development.

STRING ORCHESTRA
IP
CN: NO11 (Fall) NO12 (Spring)

Grades 9-12 36 wks. 1.0 credit
Prerequisite: Audition

This course is intended to offer the student an opportunity to develop a repertoire ranging from traditional orchestral literature to popular music. Individual musical skill development will be encouraged in the areas of tone, intonation, rhythm, technique, and expression.

BUTLER HIGH SCHOOL CHORUS
IP, VL
CN: NC41 (Fall)
NC42 (Spring)

Grades 9-12 36 wks. 1.0 credit
OR
Grades 9-12 18 wks. 0.5 credit

Chorus is a full-time sequential course designed to give students the opportunity to sing and perform as a large ensemble in a concert setting. Students will learn proper vocal technique while being exposed to all types of musical styles, including a focus on popular and contemporary music. Students will gain confidence in their individual singing voice as they experience the thrill of performing with a large ensemble. This fun and upbeat course provides an outlet for students to enhance their musical skills and creative qualities while developing a love and passion for singing.

HISTORY OF ROCK AND ROLL
IP, VL
CN: NRR0

Grades 9-12 18 wks. 0.5 credit

**Virtual students will be expected to
Live Stream class each day**

This course is designed as an interactive journey of the eighty-year story of Rock and Roll. The class incorporates a wide range of activities that enable students to construct their own meaning of the topics and issues covered. Students gather information and address issues presented through videos, recordings, pictures and readings. Activities include everything from classroom discussion to group investigation, and a range of performance-based activities.

VOICE TECHNIQUE
IP, VL
CN: NV30

Grades 9-12 18 wks. 0.5 credit

This course is designed for students who come with an ability to learn a new vocal song, but with a desire to better understand the vocal mechanism and goals to improve technique, tone quality, diction, breath control, and other aspects of singing. Units will be presented in Broadway music, vocal jazz, art songs, modern pop, IPA (international phonetic alphabet), and other relevant eras in vocal music. Each student must be prepared to sing in front of their peers and to work with the instructor in short segments.

MUSIC & TECHNOLOGY

INSTRUCTIONAL MODE KEY

IP: In-person

VB: Virtual Blended

VL: Virtual Live

MUSIC THEORY

IP, VL

CN: NT30

Grades 9-12 18 wks. 0.5 credit

Virtual students will be expected to Live Stream class each day

This advanced course will introduce students to the foundations of music theory. Topics will include notation, intervals, scale forms, triads, chord progressions, voice leading, and rhythm. Information will be presented by way of computer software, lecture and demonstrations.

SONG WRITING

IP

CN: NE30

Grades 9-12 18 wks. 0.5 credit

Prerequisite: It is recommended that students take theory first, but no prerequisite will be enforced.

Students in this course will learn methods to write songs through an understanding of musical form, tonal harmony and melodic structures. Whether the student is a budding pop song writer or a classical composer, the course will explore all genres and help students to refine their skills in writing songs and music pieces in forms that are marketable and distributable.

AUDIO RECORDING I

IP, VB

CN: NR30

Grades 9-12 18 wks. 0.5 credit

This course will give students an introduction to the field of professional sound recording. Students will learn a brief history of recording, the set-up process for various recording projects, and how to use some high quality audio recording equipment, as well as home studio consumer equipment. Students will get hands-on experience using recording gear in most aspects of audio production starting with studio set-up and ending with CD creation, jacket cover design, and distribution.

AUDIO RECORDING II

IP, VB

CN: NR40

Grades 9-12 18 wks. 0.5 credit

Prerequisite: The Art of Audio Recording

This class will pick up where Audio Recording I left off, giving students more experience using mixers, microphones, and recording software and hardware. This class will be project-based and hands-on, incorporating knowledge of the science behind audio recording along with musical aspects as well.

NOTES

RECOMMENDED SCIENCE COURSE SEQUENCES

Grade	Basic Level Sequence	Academic Level Sequence	Honors Level Sequence	ADD-on Science Electives
9	Comprehensive Science 9	Academic Biology	Honors Biology	
10	Biology	Academic Chemistry, Comprehensive Science 10 and / or Keystone Biology Exam Prep	Honors Chemistry *and/or Keystone Biology Prep	Fisheries/ Aquatic Science, Forensic Science 1 & 11, Health Care/ Careers
11	Physical and Environmental Science and/ or Keystone Biology Exam Prep	Academic Chemistry, Academic Physics, or Anatomy & Physiology	AP Biology, AP Chemistry, Academic Physics, AP Physics 1, AP Physics C, Honors Environmental Science Anatomy & Physiology (either Academic or Honors)	Biotechnology, Fisheries/ Aquatic Science, Forensic Science 1 & 11, Health Care/ Careers, Organic Chemistry
12	Ecology & Environmental Science	Academic Chemistry, Academic Physics, or Anatomy & Physiology	AP Biology, AP Chemistry, AP Physics I, AP Physics II, AP Physics C, Honors Environmental Science Anatomy & Physiology (either Academic or Honors)	Biotechnology, Fisheries/ Aquatic Science, Forensic Science 1 & 11, Health Care/ Careers, Organic Chemistry
<p>*When Scheduling, students should pay close attention to course prerequisites (outlines in this course guide) and teacher recommendations.</p>				

SCIENCE

INSTRUCTIONAL MODE KEY

IP: In-person

VB: Virtual Blended

VL: Virtual Live

SCIENCE - 3.0 credits required for graduation

COMPREHENSIVE SCIENCE 9

IP

CN: SG20

Grade 9 36 wks. 1.0 credit

Prerequisite: Admission to Applied Level Courses

Comprehensive Science 9 is a basic level course designed to introduce general concepts of the Earth's functions as it relates to water, tectonic plates, atmospheric and general composition, and weather/climate during semester one. Semester two will have a heavy focus on biology in order to best prepare students for future courses.

COMPREHENSIVE SCIENCE 10

IP, VB

CN: SG30

Grade 10 36 wks. 1.0 credit
Average Level

Comprehensive Science 10 is an academic level course for sophomores comprised of an introduction to chemistry and physics concepts. It is a hands-on course for students to explore the laws, theories, and applications of the physical sciences in the world around them.

FISHERIES/AQUATICS SCIENCE

IP

CN: SFA30

Grade 10, 11, 12 18 wks. 0.5 credit

Prerequisite: Biology with a B or high (Academic), C or higher (Honors)

This course is a 1 semester science elective. Students study a variety of topics that include: components of an aquatic ecosystem; relationships among aquatic habitats and ecosystems; roles of cycles within an aquatic environment; adaptations of organisms; changes within aquatic environments; geological phenomena and fluid dynamics effects; and origin and use of water in a watershed. Students will spend lab time in the SHS Fisheries Science Lab working as part of our PA Fish & Game Commission Nursery Catfish and Trout in the Classroom programs.



FORENSIC SCIENCE 1

IP

CN: SF10

Grade 10, 11, or 12 18 wks. 0.5 credit
Average/Above Levels

Forensic science is an investigative course that analyzes criminal evidence. Some of the topics that will be discussed are: crime scene investigations, fingerprinting, handwriting, blood and blood splatter, and DNA fingerprinting.



FORENSIC SCIENCE II
IP
CN: SF20

Grade 10, 11, or 12 18 wks. 0.5 credit

Prerequisite: At least a "C" in Forensics Science I

This course will be designed to continue to challenge students with topics such as DNA analysis, arson, impressions, ballistic trajectories, cyber-crime, and chemical analysis of drugs, poisons, and trace evidence. Students will learn about careers involved with forensics science and will have the opportunity to investigate, and create, crime scenes. The students will be given the tools to interpret data and techniques for both chemical and biological analysis of evidence.

BIOLOGY
IP, VB
CN: SB20

Grade 10 36 wks. 1.0 credit
Basic Level

Prerequisite: Admission to Basic Level Courses

Basic biological principles will be examined through the topics of biochemistry, protein synthesis, genetics, ecology, and evolution. Emphasis will be placed on the **Keystone Exam that is required at the end of the school year.**

ACADEMIC BIOLOGY
IP, VB
CN: SB30

Grade 9 36 wks. 1.0 credit
Average/Above Levels

Prerequisite: 8th grade science teacher recommendations

Academic biology is a comprehensive course that is designed to provide students with an in-depth understanding of major biological concepts. The course includes the following topics: cells, protein synthesis, biochemistry,

genetics and ecology. **Students in this course are required to take the end-of-course Keystone Exam.**

KEYSTONE BIOLOGY
EXAM PREP
IP, VB
CN: SB25

Grade 10 or 11 36 wks. 1.0 credit

Students who have not scored proficient on the Keystone Biology Exam can schedule this class.

This course is intended to provide supplemental instruction for those students who need to retake the Keystone Biology Exam. Topics from Biology will be revisited through various lab experiences, practice exams, animations, and web-based tutorials.

HONORS BIOLOGY
IP, VB
CN: SB40
Gifted: SB45

Gifted enrollment is limited to students in the Gifted Program and must be approved by Gifted Coordinator/GIEP

Grade 9 36 wks. 1.0 credit
Honors Level

Prerequisite: an "A" in science or with teacher recommendation and "A" or "B" in Algebra I

This is a high level, fast-paced course for the committed science student. Topics include ecology, natural selection, biochemistry, cellular activities, genetics, and classification. Emphasis will be given to the scientific method, laboratory experiences, and the practical application of these skills and knowledge. Modifications are available for gifted students.

Students in this course are required to take the end-of-course Keystone Exam.



BIOTECHNOLOGY
IP
CN: SB35

Grade 11 or 12 18 wks. 0.5 credit
Average/Above Levels

Prerequisite: At least a "C" in Biology and Chemistry

Designed for students with a high level of interest in science and planning on a biological or medical career, this semester course is the study of molecular and cell biology. Topics include chemical bonding, molecular forces, bioorganic compounds, DNA replication, protein synthesis, and bacterial genomics.

A.P. BIOLOGY
IP
CN: SB50
Gifted: SB55

Gifted enrollment is limited to students in the Gifted Program and must be approved by Gifted Coordinator/GIEP

Grade 11 or 12 36 wks. (10 pds/wk) 1.0 credit
Advanced Placement

Prerequisite: "A" or "B" in both Biology and Chemistry.

Intended for students pursuing medical, veterinarian, or healthcare careers, this rigorous lab oriented college-level course prepares for the AP Exam administered in the spring. Course topics include cells, biochemistry, heredity, cellular energy, ecology, molecular biology, and evolution.



HEALTH CAREERS
IP, VB
CN: SH30

Grade 10, 11, or 12 18 wks. 0.5 credit
Average Level

Prerequisite: At least a "C" in Biology and successful completion of or enrolled in Chemistry.

This course introduces students interested in health-related careers to core concepts that are reflected throughout the health professions.

Topics include therapeutic communications, medical law and ethics, foundation skills, and investigations of health careers.



ANATOMY & PHYSIOLOGY
IP, VB
CN: SA30

Grade 11 or 12 36 wks. 1.0 credit
Average/Above Levels

Prerequisite: "C" or above in Biology and successful completion of or enrollment in Chemistry

This course is designed to prepare students for healthcare or medical careers. The ten systems of the body are explored with many lab experiences offered. Actual and virtual dissections of various mammalian structures are performed along with case studies and diagnostic activities to enhance students' problem-solving skills.

HONORS ANATOMY & PHYSIOLOGY
IP, VB
CN: SA40

Grade 11 or 12 36 wks. (5 pds./wk.) 1.0 credit
Honors Level

Prerequisite: 90% or better in both Honors Biology and Honors Chemistry

This rigorous course is intended for motivated students intent on medical field careers. Body organization, homeostasis, cytology, the ten body systems, and clinical applications will be presented. Lab work will include dissections, case studies, mock medical scenarios, vital signs instruction, research design and analysis.

ACADEMIC CHEMISTRY

IP, VB

CN: SC30

Grade 10 or 11 36 wks. (7pds/wk.) 1.0 credit
Average Level

Prerequisite: Successful completion or enrollment in Algebra I and successful completion of Biology

This course introduces the student to basic chemistry principles and concepts. The topics will include matter, atomic structure, elements, the periodic table, compounds, and chemical reactions. Lab experiences coordinate material and stress technique.

HONORS CHEMISTRY

IP, VB

CN: SC40

Gifted: SC45

Gifted enrollment is limited to students in the Gifted Program and must be approved by Gifted Coordinator/GIEP

Grade 10 or 11 36 wks. (7 pds/wk.) 1.0 credit
Honors Level

Prerequisite: Completion of or enrolled in Algebra II. Successful completion of Honors Biology or an "A" in Academic Biology or Biology with teacher recommendation.

This course will emphasize the fundamental principles of the structure of atoms and molecules, chemical bonding, chemical reactions, periodicity, stoichiometry, nomenclature, gas laws, and acids and bases. Proper lab and data analysis techniques will be developed.

A.P. CHEMISTRY

IP

CN: SC50

Gifted: SC55

Gifted enrollment is limited to students in the Gifted Program and must be approved by Gifted Coordinator/GIEP

Grade 11* or 12 36 wks. (10 pds./wk.) 1.0 credit
Advanced Placement

Prerequisite: Honors Chemistry and Algebra II

This second year chemistry course centers around the curriculum published by the College Board. Advanced topics include atomic structure, bonding, gas laws, thermodynamics, solutions, electrochemistry, and equilibrium. Laboratory exercises stress laboratory techniques and applications of theory.

ORGANIC CHEMISTRY

IP

CN: SC35

Grade 11 or 12 18 wks. 0.5 credit
Honors Level

Prerequisites: "A" in Academic Chemistry, minimum "B" in Honors, successful completion of AP Chemistry

This course introduces concepts and topics in organic chemistry to serve as a foundation for students considering a career in chemistry or other related STEM fields. It will include an overview of the major topics covered in college level first semester organic chemistry. These topics include: IUPAC nomenclature, functional groups, characterization, structure and conformations among others.

ECOLOGY and ENVIRONMENTAL SCIENCE
IP, VB
CN: SE30

Grade 11 or 12 36 wks. 1.0 credit
Basic Level

This course examines the relationship of biological, environmental, and physical science to the student's daily life. Ecological systems with special emphasis on environmental damage will be studied. Topics such as soil and water ecology, pollution, population growth, and natural resource conservation are included.

HONORS ENVIRONMENTAL SCIENCE
IP, VB
CN: SE40

Grade 11 or 12 36 wks. 1.0 credit
Honors Level

Prerequisite: Biology and Chemistry

This course will cover a variety of topics from biology, geology, chemistry, and geography as they relate to Environmental Science. Presented at a higher level, the course is designed to meet the needs of students planning a career in an environmental-related field.

PHYSICAL AND ENVIRONMENTAL SCIENCE
IP, VB
CN: SE20

Grade 11 or 12 36 wks. 1.0 credit
Basic Level

This course is designed to provide general, physical and environmental science concepts and skills to the basic level student. Concepts explored include selected earth, space, weather, and environmental science topics.

ACADEMIC PHYSICS
IP, VB
CN: SP30

Grade 11 or 12 36 wks. (7 pds/wk.) 1.0 credit
Academic (Average) Level

Prerequisite: Successful completion or enrollment in Algebra II and successful completion of Chemistry or Comprehensive Science 10.

This is a moderately paced laboratory course requiring the use of Algebra and Geometry. Physics laws are linked to scientific theory through the use of math and problem-solving. Topics may include: mechanics (motion, forces, energy and momentum) and energy (heat, light, sound and electricity/magnetism).

A.P. PHYSICS I
IP, VB
CN: SP60

Grade 11 or 12 36 wks. (7 pds/wk.) 1.0 credit
Honors Level/Advanced Placement

Prerequisite: A "C" or better or enrollment in Pre-Calculus and a "C" or better in Honors Chemistry

AP Physics I is an algebra-based, introductory college-level course that includes laboratory experiences. Topics include: kinematics; dynamics; circular motion and gravitation; energy; momentum; simple harmonic motion; torque and rotational motion; electric charge and force; DC circuits; and mechanical waves and sound.

A.P. PHYSICS II
IP, VB
CN: SP70

Grade 12 36 wks. (7 pds/wk.) 1.0 credit
Honors Level/Advanced Placement

Prerequisite: Completion of any prior Physics course and enrollment in Pre-Calculus or higher

AP Physics II is an algebra-based, introductory college-level Physics course that includes laboratory experiences. Topics include: fluids; thermodynamics; electrical force, field and

potential; electric circuits; magnetism and electromagnetic induction; geometric and physical optics; and quantum, atomic and nuclear physics.

**A.P. PHYSICS C: MECHANICS
IP, VB**

CN: SP50 Gifted: SP55

Gifted enrollment is limited to students in the Gifted Program and must be approved by Gifted Coordinator/GIEP

Grade 11 or 12 36 wks. (10 pds./wk.) 1.0 credit
Advanced Placement

Prerequisite: Completion of or currently enrolled in Calculus AB

Physics C: Mechanics is equivalent to a calculus-based, college-level physics course. Topics include: kinematics; Newton's laws of motion; work, energy and power; systems of particles and linear momentum; circular motion and rotation; and oscillations and gravitation. Introductory differential and integral calculus is used throughout the course.

NOTES

SOCIAL STUDIES

INSTRUCTIONAL MODE KEY

IP: In-person

VB: Virtual Blended

VL: Virtual Live

Social Studies 4.0 credits Required for Graduation

World History to 1450 9 (Required, 1 credit)
World History 1450-Present 10 (Required, 1 credit)
Modern American History 11 (Required, 0.5 credit) OR
AP US History (1 credit)
Amer. Government 11 (Required, 0.5 credit) OR AP US
History (1 credit)
Economics 12 (Required, 0.5 credit) OR AP
Comparative Government (0.5 credit) OR AP European
History (1 credit) OR AP Macroeconomics (0.5 credit)
Required Elective 10-12: Law and Order I OR
Psychology OR Sociology OR Current Events OR
Geography Edgenuity (Required, 0.5 credit)

WORLD HISTORY TO 1450

IP, VB

CN: HW20

Grade 9 36 wks. 1.0 credit
Basic Level

Prerequisite: Admission to Basic Level Courses

Each student is required to take World History to 1450 in ninth grade. This course will introduce the student to the development of civilization in the ancient, and medieval periods of history from a global perspective (*ca.* prehistory – A.D. 1450). Students will use a variety of resources to study narrative history, geography, and cultures of the world's people. This level of the course is geared towards students who have difficulty reading and/or comprehending historical text and other written materials.

WORLD HISTORY TO 1450,

IP, VB

ACADEMIC

CN: HW30

Grade 9 36 wks. 1.0 credit
Academic Level

Each student is required to take World History to 1450 in ninth grade. This course will introduce the student to the development of civilization in the ancient, and medieval periods of history from a global perspective (*ca.* prehistory – A.D. 1450). Students will use a variety of resources to study narrative history, geography, and cultures of the world's people. This level of the course is intended for students who experience little or no difficulty in reading and/or comprehending historical text or other written materials.

WORLD HISTORY TO 1450,

IP, VB

HONORS/GIFTED

CN: HW40

Gifted: HW45

(Gifted enrollment is limited to students in the Gifted Program and must be approved by Gifted Coordinator/GIEP)

Grade 9 36 wks. 1.0 credit
Honors Level

Each student is required to take World History to 1450 in ninth grade. This course will introduce the student to the development of civilization in the ancient and medieval periods of history from a global perspective (*ca.* prehistory – A.D. 1450). Students will use a variety of resources to study narrative history, geography, and cultures of the world's people. This level of the course is

appropriate for students who experience no difficulty in reading and/or comprehending historical text or other written materials and are able to research and write independently. Modifications are available for gifted students.

GEOGRAPHY (Edgenuity Only)
VB
CN: HG20

Grades 9-12 18 wks. 0.5 credit

This course is offered on the Edgenuity platform and is only available as an online course. The content is designed for students enrolled in academic or beginner courses. The course covers a basic introduction to geography.

CURRENT EVENTS
IP
CN: HM20

Grades 9-12 18 wks. 0.5 credit
Basic/Average Levels

This course will emphasize current events at a local, national, and international level. Students will incorporate the use of a multitude of resources such as the internet, newspapers, magazines, and cable networks.

WORLD HISTORY 1450 - PRESENT
IP, VB
CN: HH20

Grade 10 36 wks. 1.0 credit
Basic Levels

Each student is required to take World History 1450-Present in tenth grade. This course will introduce the student to the development of civilization in the ancient, and medieval periods of history from a global perspective (*ca.* A.D. 1450 - present). Students will use a variety of resources to study narrative history, geography, and cultures of the world's people. Students will also be responsible for the 10th grade Social

Studies Project (*as outlined on page 6*). This level of the course is geared towards students who have difficulty reading and/or comprehending historical text and other written materials.

WORLD HISTORY 1450 – PRESENT,
IP, VB
ACADEMIC
CN: HH30

Grade 10 36 wks. 1.0 credit
Average Level

Each student is required to take World History 1450-Present in tenth grade. This course will introduce the student to the development of civilization in the modern period of history from a global perspective (*ca.* A.D. 1450 - present). Students will use a variety of resources to study narrative history, geography, and cultures of the world's people. Students will also be responsible for the 10th grade Social Studies Project (*as outlined on page 6*). This level of the course is appropriate for students who do not experience any difficulty in reading and/or comprehending historical or cultural materials.

WORLD HISTORY 1450 – PRESENT,
IP, VB
HONORS (OR GIFTED)
HONORS CN: HH40
Gifted: HH45

Gifted enrollment is limited to students in the Gifted Program and must be approved by Gifted Coordinator/GIEP

Grade 10 36 wks. 1.0 credit
Honors Level

Prerequisite: "C or higher in most recent Honors or AP Social Studies course or an A in you most recent Academic Social Studies course"

Each student is required to take World History 1450-Present in tenth grade. This course will introduce the student to the development of civilization in the modern period of history from a global perspective (*ca.* A.D. 1450 - present). Students will use a variety of resources to study narrative history, geography, and cultures of the

world's people. Students will also be responsible for the 10th grade Social Studies Project (*as outlined on page 6*). This level of the course is appropriate for students who experience no difficulty in reading and/or comprehending historical or cultural materials and are able to research and write independently. *Modifications are available for gifted students.*

**A.P. WORLD HISTORY: MODERN
IP
CN: HH50**

Grade 10 36 wks. 1.0 credit
Advanced Placement

Prerequisite: This course may be taken with teacher recommendation and B or higher in Honors World History to 1450 in place of Honors World History Since 1450.

In AP World History: Modern, students investigate significant events, individuals, developments, and processes from 1200 to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical connections; and utilizing reasoning about comparison, causation, and continuity and change over time. The course provides six themes that students explore throughout the course in order to make connections among historical developments in different times and places: humans and the environment, cultural developments and interactions, governance, economic systems, social interactions and organization, and technology and innovation. The course is designed to be roughly the equivalent to an introductory college or university survey of modern world history and prepare students for the Advanced Placement Examination given in the Spring.

**SOCIOLOGY
IP, VB
CN: HS30**

Grade 10, 11, or 12 18 wks. 0.5 credit

This course is a glimpse of the major concepts of sociology – the study of human society and interaction. The course uses multiple perspectives to focus on the issues of: culture, social interaction, socialization, groups, institutions, crime, collective behavior, and social inequality.

**BC3 SOCIOLOGY
IP
CN: HS35**

Grade 11 or 12 18 wks. 0.5 credit

Prerequisite: minimum 3.0 overall GPA (3 college credit hours)

This is a dual enrollment course offered in conjunction with Butler County Community College. Students enrolled in this college course will receive an orientation to the field of sociology dealing generally with our social institutions and their functions. There is an examination of the concepts of culture, personality, social process, social institution, and social change.

Students will be required to purchase their own textbook from the BC3 bookstore. Students must register and pay for this course prior to being scheduled. (Approximate Cost \$400 per 3 credit hours) See the guidance office for details.

**MODERN AMERICAN HISTORY
IP, VB
CN: HA20**

Grade 11 18 wks. 0.5 credit
Basic Level

Prerequisite: Admission to Basic Level Courses

The course is intended to provide the student with a broad overview of American history from World War II to the present. This course uses a chronological and thematic approach in covering the major events and personalities that have shaped modern American society. The student will be responsible for reading assignments, exams, and class projects as required by the instructor. The course is designed to help those students who have difficulty reading and comprehending historical information.

**MODERN AMERICAN HISTORY, ACADEMIC
IP, VB
CN: HA30**

Grade 11 18 wks. 0.5 credit
Average Level (Required Course)

Using a chronological and topical approach, this course will cover the major events and personalities in American history from World War II to the present. Homework and some computer/ library work will be required. The emphasis will be on the major trends leading to the events of the present day.

**MODERN AMERICAN HISTORY, HONORS
IP, VB
CN: HA40**

Grade 11 18 wks. 0.5 credit
Honors Level

“Prerequisite: C or higher in most recent Honors or AP Social Studies course or an A in your most recent Academic Social Studies course”

This course provides an in-depth study of American culture from World War II to the present. Using a chronological approach, the

major events and personalities of the past 80 years will be studied. This course is designed for students interested in American history as well as those going into post-high school education. A moderate amount of computer-based research will be required.

**A.P. U.S. HISTORY
IP, VB
CN: HA50
Gifted: HA55**

(Gifted enrollment is limited to students in the Gifted Program and must be approved by Gifted Coordinator /GIEP)

Grade 10, 11, or 12 36 wks. 1.0 credit
Advanced Placement

Prerequisite: This course may be taken with teacher recommendation and B or higher in most recent Honors or AP Social Studies course” in place of the required Modern American History and American Government courses.

This college-level course is designed to give students a foundation in the subject matter of American history and an understanding of major interpretive questions that have arisen among historians. Chronologically, it covers the time from the founding of the English colonies to the present. Students will make reports and write papers analogous to a college-level course. Students should note that this course involves extensive weekly reading assignments necessary for success. Students who successfully complete this course are not required to take American Government and Modern American History. This course is designed to prepare students for the Advanced Placement Examination given in the Spring.

A.P. EUROPEAN HISTORY

IP

CN: HE60

Gifted: HE65

(Gifted enrollment is limited to students in the Gifted Program and must be approved by Gifted Coordinator /GIEP)

Grade 11 or 12 36 wks. 1.0 credit
Advanced Placement

Prerequisite:

This course may be taken with teacher recommendation and "B or higher in most recent Honors or AP Social Studies course" in place of the required Economics course.

This course is designed to provide the student with an in-depth study of European history. Chronologically, it covers the years from the end of the Middle Ages to the present. One goal is the further understanding of the diplomatic, political, and economic structure of the modern world. A second is to develop an appreciation of the scientific and cultural contributions made by the creators of the western heritage; and a third, to promote the ability to see relationships between political, economic, and intellectual history. Students will participate in debates and group discussions, as well as reviewing two books during the year. Students who successfully complete this course are not required to take Economics. This course is designed to prepare students for the Advanced Placement Examination given in the Spring.

U.S. GOVERNMENT

IP, VB

CN: HG20

Grade 11 18 wks. 0.5 credit
Basic Level

Prerequisite: Admission to Basic Level Courses

Students will become more informed citizens through this course. Students will learn about the history of our government, what it means to be a citizen, the three branches of government, voting, and political parties. Students will also use the computer lab and

library to research careers.

U.S. GOVERNMENT, ACADEMIC

IP, VB

CN: HG30

Grade 11 18 wks. 0.5 credit
Average Level

To improve citizenship perspectives, this course teaches the transition from colonial to constitutional government, principles of American government, the American political system, presidency/congress/judiciary, political parties, and the voter in modern society. There will be an introduction to Pennsylvania government as well.

U.S. GOVERNMENT - HONORS

IP, VB

CN: HG40

Grade 11 18 wks. Required 0.5 credit
Honors Level

Prerequisite: "C or higher in most recent Honors or AP Social Studies course or an A in your most recent Academic Social Studies course"

This course emphasizes major high level political concepts. The organization and conduct of this course is designed to help the average or above-average student who desires post-high school education. This course analyzes constitutional rights and privileges, the federal system, measuring the American presidency, legislative and judicial functions, and voting and political parties. The state and local government will also be featured. Considerable computer-based research will be required.

**A.P. COMPARATIVE GOVERNMENT
IP
CN: HG50**

Grade 11 or 12 18 wks. 0.5 credit
Advanced Placement

Prerequisite: This course may be taken with teacher recommendation and "B or higher in most recent Honors or AP Social Studies course" in place of the required Economics Course.

This college-level course is designed to provide students with an understanding of the government and political systems existent in Great Britain, Iran, China, Russia, Nigeria, and Mexico. Topics discussed in the course will include the different types of regimes found around the world. Students will also be exposed to various issues dealing with current foreign and domestic policy situations. This course will be of particular interest to students who wish to start learning about these topics. Students will use the library to complete writing assignments and will be expected to participate in organized debates, complete reading assignments, and engage in critical thinking activities throughout the course of the semester. Students who successfully complete this course are not required to take Economics. This course is designed to prepare students for the Advanced Placement Examination given in the Spring.

**A.P. MACROECONOMICS
IP
CN: HE50**

Grade 12 18 wks. 0.5 credit
Advanced Placement

Prerequisite: This course may be taken with teacher recommendation and "B or higher in most recent Honors or AP Social Studies course" in place of the required Economics Course.

The purpose of the AP course in macroeconomics is to give students a thorough understanding of the principles of economics that apply to an economic system as a whole.

The course places particular emphasis on the study of national income and price-level determination, and also develops students' familiarity with economic performance measures, the financial sector, stabilization policies, economic growth, and international economics.

The course is designed as an initial college-level course in macroeconomics and as a foundation for possible future study in economics or business. Students' second goal of the course is to prepare for the AP Exam. The exam will take place in May. Passing the exam will result in college credit at almost all colleges and universities. Throughout the course, students will have ample opportunity to improve their writing, speaking, critical-thinking, and consensus-building skills.

**ECONOMICS
IP, VB
CN: HE20**

Grade 12 18 wks. 0.5 credit
Basic Level

Prerequisite: Admission to Basic Level Courses

This course is designed to promote and develop consumer education and skills which all citizens need in order to function more efficiently in a market society. Emphasis will be placed on everyday economic choices/decisions most citizens face, such as personal budgets, sources of income (i.e., vocational choices, investment/savings), and credit vehicles and the use and maintenance of credit/debit accounts. Additionally, the student will explore consumer rights issues and their role as consumers within the circular flow of economic activity.

**ECONOMICS, ACADEMIC
IP, VB
CN: HE30**

Grade 12 18 wks. 0.5 credit
Average Level

This course is designed to teach economic concepts, skills, and ideas which the average citizen needs in order to function efficiently in the market place. Emphasis is on the functions of production, consumptions, economic institutions, the workers and productivity, and major economic agencies. Also emphasized is the basic background for everyday economic decisions most citizens must choose, such as household budgets, personal investments, insurance options, etc. Some library work will be required.

**ECONOMICS, HONORS
IP, VB
CN: HE40**

Grade 12 18 wks. 0.5 credit
Honors Level

“Prerequisite: C or higher in most recent Honors or AP Social Studies course or an A in you most recent Academic Social Studies course”

This course emphasizes major high-level economic concepts. The organization and conduct of this course is designed to help the student of average or above-average ability who desires post-high school education. This course analyzes concepts and ideas such as economic scarcity, resource allocation, free market power and price determination, causes, consequences, and cures for inflation, as well as economic controls and productivity.

**PSYCHOLOGY
IP, VB
CN: HP30**

Grade 10, 11, or 12 18 wks. 0.5 credit

The purpose of this course is to introduce the senior high school student to the study of human behavior and personality from an academic perspective. Audio-visual material, group activities, role-playing, and class discussion are used to expose the student to the history, development, and schools of psychology.

**BC3 PSYCHOLOGY
IP
CN: HP35**

Grade 11 or 12 18 wks. 0.5 credit

Prerequisite: minimum 3.0 over all GPA
(3 college credit hours)

This is a dual enrollment course offered in conjunction with Butler County Community College. Students enrolled in this college course will receive a basic introduction to the basic concepts and methods of the scientific study of behavior. Topics include: the history of Psychology; research methods; the biology of behavior; classical and operant conditioning; memory; cognition, language, and intelligence.

Students will be required to purchase their own textbook from the BC3 bookstore.

Students must register and pay for this course prior to being scheduled. (Approximate Cost \$400 per 3 credit hours) See the guidance office for details.

LAW AND ORDER I
IP
CN: HJ30

Grade 10, 11, or 12 18 wks. 0.5 credit

Law and Order I is an introductory exploration of the current operation and future trends of criminal justice in the United States. Students will be introduced to the notion of “crime” and “crime prevention”, investigatory strategies, legal strategies, correctional practices, and the differences between criminal and civil law. In addition to traditional instruction, the course will involve multiple mock trials and will also incorporate guest speakers who have first-hand experience in the legal profession.

LAW AND ORDER II
IP
CN: HJ 40

Grade 11 or 12 18 wks. 0.5 credit

Prerequisite: “C” or Higher in Law I

This course will be a continuation of the content taught in Law and Order I, with more focus on civil and family law. This course is an introduction to law and public speaking with a little time spent on acting. We will be primarily focusing on the following: legal/court procedure, rhetoric, and public speaking. In other words, we’ll be learning about how our court system works, how to use rhetoric to be more persuasive, and how to speak effectively to an audience. All of these skills are vital to a job in law, but will help in almost every other facet of life. Students who perform well in mock trial are able to make the leap to the mock trial competitive team more effectively as well as be better prepared for state testing, ACTs, and SATs.

TECHNOLOGY EDUCATION

INSTRUCTIONAL MODE KEY

IP: In-person

VB: Virtual Blended

VL: Virtual Live

The Technology Education classes are grouped into four focused pathways. The Engineering Pathway consists of three essential and three supplemental courses. This pathway primarily utilizes current computer technology and software, although the advanced classes will be using some tools, equipment, and lab space to perform prototype construction and other hands-on activities. The Exploring Computer Aided Drafting class provides an introduction to technical sketching, design, and basic 2D drawings with layout, construction and computer-aided software. The Architectural Pathway consists of five essential and two supplemental courses. The Architectural Pathway teaches computer aided design with various aspects of civil, commercial and residential designs. Site plans, elevations, construction details, floor plans and 3D models will be produced. The Manufacturing Pathway consists of six essential and three supplemental courses. Design and Manufacturing and Material Engineering are the foundations of this pathway. You will have the opportunity to use CAD software to design a project(s) in a Manufacturing Lab. The Agricultural Pathway will consist of three essential courses and work on emphasizing real-world, occupationally relevant experiences of significant scope and depth in Agricultural Business, Agricultural Mechanics, Agriscience, Animal Science, Forestry and Natural Resources, Ornamental Horticulture, and Plant and Soil Science.

PATHWAYS	Architecture / Construction Pathway	Manufacturing Pathway	Engineering Pathway
ESSENTIAL COURSES	Exploring Computer Aided Drafting	Exploring Computer Aided Drafting	Exploring Computer Aided Drafting
ESSENTIAL COURSES	Materials Engineering	Materials Engineering	PLTW Intro to Engineering
ESSENTIAL COURSES	Architectural Design	2023-24 Design and Manufacturing	Advanced Engineering
ESSENTIAL COURSES	Advanced Architecture	Advanced Materials	
ESSENTIAL COURSES	Advanced Materials	2023-24 Applied Engineering and Manufacturing	
ESSENTIAL COURSES		PLTW Intro to Engineering Design	
SUPPLEMENTAL			<i>Engineering Design</i>

<i>COURSES</i>	<i>2024-2025 Maker Lab</i>	<i>Game Development</i>	<i>and Product Development</i>
<i>SUPPLEMENTAL COURSES</i>	<i>PLTW Intro to Engineering</i>	<i>Pre Apprenticeship</i>	<i>Power/Transportation Technology</i>
<i>SUPPLEMENTAL COURSES</i>			<i>Principles of Engineering</i>

ENGINEERING PATHWAY

EXPLORING COMPUTER-AIDED DRAFTING IP, VL CN: ID20

Grades 9-12 36 wks. 1.0 credit
All Levels

Recommended for students who have an interest in computer aided drafting and design, engineering, architecture, and interior design. Course will begin by exploring the fundamentals of drafting and design such as 2D and 3D drawings, and dimensioning. Students will then progress to the use of the latest versions of Autocad, Inventor, and Revit software. Architectural design will also be covered in this course. Students will also use software to use 3D printers and laser engraving software to produce prototypes.

INTRODUCTION TO ENGINEERING (Project Lead the Way) IP, VL CN: ID30

Grades 9-12 36 wks. 1.0 credit
All Levels

The curriculum of this course is designed to introduce students to multiple fields of engineering. This course is a good way to explore whether you possess the interests and aptitudes to pursue a career in one of the many fields of engineering. It will also give you the base information to take more advanced computer aided drafting classes. In

this class the Project Lead the Way Curriculum will be used.

ENGINEERING DESIGN and PRODUCT DEVELOPMENT CN: IE30

*Prerequisite: Exploring Computer aided Drafting or
Introduction to Engineering*
Grades 10, 11 or 12 36 wks 1.0 credit

This advanced engineering and design course will allow students to work independently to research, design and create engineering projects of their own. The emphasis of this course will be placed on the use of the engineering design process. Careers in engineering, drafting, and industrial design will be explored. The engineering design and product development course will allow students the opportunity to manufacture working prototypes of their product or invention.

ADVANCED ENGINEERING IP CN: IE40

Grade 11 or 12 36 wks. 1.0 credit

**Prerequisite: Exploring Computer Aided
Drafting, Introduction to Engineering,
Engineering Design and Product Development**

This course is a continuation of the CAD Engineering class which will provide students an opportunity to complete their own problem solving activities. Students will

research, design, and test prototypes using the engineering design loop. Students will develop skills in math science, technology, engineering, and communication while taking this course.

ARCHITECTURAL PATHWAY



ARCHITECTURAL DESIGN

IP
CN: IA30

Grade 11 or 12 36 Wks. 1.0 Credit
All Levels

Prerequisite: Exploring Computer Aided Drafting

This course is a computer aided design course that is recommended for students who have an interest in civil engineering, or architecture. This course teaches various aspects of civil, commercial and residential architectural design. Site plans, elevations, construction details, floor plans and 3d models will be produced.

ADVANCED ARCHITECTURE

IP
CN: IA40

Grade 12 36 Wks. 1.0 Credit
All Levels

Prerequisite: Exploring Computer Aided Drafting, Architectural Design

This course is a continuation of the Architectural Design class which will provide students an opportunity to complete their own problem solving activities. Students will research, design, and complete architectural models using the engineering design loop. Students will develop skills in math, science, technology, engineering, and communication while taking this course.

MANUFACTURING PATHWAY



MATERIALS ENGINEERING

IP
CN: IME3

Grades 9-12 36 Wks. 1.0 Credit

This course is designed to introduce students to different types of materials, manipulation, forming and testing and manufacturing concepts. Using the wood and metals facility students will be exposed to machining, cutting, welding, CNC machining and finishing of wood and metal projects. This course is intended for students who are looking at a future in manufacturing or engineering where the understanding of the use and application of materials is important.

DESIGN AND MANUFACTURING

IP
CN: IDW1

Grades 9-12 36 Wks. 1.0 Credit

This course is designed to give students the opportunity to use AutoCAD software to design a project(s) to be produced in the Manufacturing Lab. The students will spend the first semester designing and researching their projects to create a set of working drawings using Inventor and AutoCAD software. The students will research materials, hardware, etc. in which to construct their projects, along with the cost to produce it. The second semester is in the manufacturing lab where they will use their drawings to produce the project(s). Students will learn the safe and efficient use of the tools and machines, including the CNC router, in the manufacturing lab. Students are required to provide a pair of safety glasses, with clear lenses, for this course and pay for the materials used to produce projects.

ADVANCED MATERIALS ENGINEERING

CN: IME4

Grade 10, 11 or 12 36 wks. 1.0 credit

Prerequisites: Materials Engineering

This course is designed to test the ability levels of each student in the modern manufacturing environment. Using the wood and metals facility students will apply various manufacturing techniques and concepts to manufacture projects in wood and/or metal. This course is intended for students who are looking at a future in manufacturing or engineering where the understanding of the use and application of materials is important. Students in this class will design and manufacture more advanced projects in wood or metal.

APPLIED ENGINEERING AND MANUFACTURING

CN: IE45

Grade 11 or 12 36 wks. 1.0 credit

Prerequisites: Materials Engineering

Students will participate in an action-oriented classroom which will feature Illustrated lecture, discussion, demonstration, hands-on activities and presentations, hands-on activities and presentations, and project presentations. The emphasis will be on doing rather than talking about technology, mathematics, Science, and art. This will be treated as an honors level course. Examples of projects completed in this class are: Mold production projects, 3D printing, robot programming, and transportation projects.

STAND ALONE CLASSES OR CAN BE TIED INTO A PATHWAY

POWER/TRANSPORTATION TECHNOLOGY

CN: IK10

Grades 9-12 18 wks. 0.5 credit
All Levels

Power/Transportation Technology is a one-semester course which is designed to introduce the basic concepts of Power and Transportation. Students will be involved in hands-on activities which will incorporate problem solving and creative design engineering into each activity. The activities may include energy forms, electricity, electronics, solar energy/power, aerodynamic design engineering, rocket propulsion, and robotics. Use of hand and power tools, and power equipment as well as career opportunities and training will be discussed. Various applications of measurement, measuring systems, and instruments will be used throughout the course. CNC software and equipment may be used in the activities.

GAME DEVELOPMENT

IP

CN: IG10

Grades 9-12 18 wks. 0.5 credit
II Levels

Game Development is a game design Course and much more. Technical skills such as programming, graphic design, animation, testing and debugging will be taught in this course. Skills taught will be transferable to other STEM (Science, Technology, Engineering, & Math) career paths. Game Development will begin with drag-n-drop programming and advance to more complex projects that involve writing code. The engineering problem solving cycle plays a large role with integrating physics and math principles into game functionality. After you have learned how to develop and program a game, you will investigate how to market an original game idea.

**PRE-APPRENTICESHIP
IP, VB
CN: IP30**

Grade 10, 11 or 12 36 wks. 1.0 credit

This course gives students an overview of high-tech modern manufacturing, consisting of an online nationally recognized curriculum and required visits (likely nine through the year) to Penn United for hands-on practical experience. Industry-recognized certifications are available to students successfully completing the course. Either students interested in manufacturing employment following high school or students planning college majors in engineering, drafting or CNC programming should consider this course.

NOTES

WORLD LANGUAGE

INSTRUCTIONAL MODE KEY

IP: In-person

VB: Virtual Blended

VL: Virtual Live

Departmental Recommendations:

- Level 1 and 2 world languages are recommended for all career paths.
- Level 3 world languages are recommended for agriculture, architecture, and construction career paths
- Level 4 and 5 world languages are recommended for arts & communications, business, health care, government, education, hospitality & tourism, human services, IT, and law/law enforcement career paths.

FRENCH I

IP, VB

CN: LF10

Grades 9-12 36 wks. 1.0 credit
Average/Above Levels

This course develops communication skills in French by using basic phrases and familiarization with pronunciation. Students will participate in simple conversations. Reading and writing of the French language are introduced. Culture of the French-speaking world is illustrated through songs, films, and other audio-visual materials.

FRENCH II

IP, VB

CN: LF20

Grades 9-12 36 wks. 1.0 credit
Average/Above Levels

Prerequisite: French I

This course continues the development of speaking as a tool of communication with the vast French-speaking world. Students will continue to learn to read and write. Cultural aspects will be included as an important part of the course. Songs, films, and other audio-visual materials will be used to promote learning.

HONORS FRENCH III

IP, VB

CN: LF30

Grade 10, 11, or 12 36 wks. 1.0 credit
Honors Levels

Prerequisite: French II

This course will further develop proficiency in understanding, speaking, reading, and writing through an emphasis on reading short stories, writing essays and making oral presentations in French. This course will prepare students for the demands of upper level study in French.

HONORS FRENCH IV

IP

CN: LF40

Grade 11 or 12 36 wks. 1.0 credit
Honors Level

Prerequisite: French III

This course focuses on the literature and perspectives of Francophone cultures. Students are also introduced to advanced grammar concepts with an emphasis on listening comprehension, speaking, writing, and reading skills. In-class discussion will be stressed.

**A.P. FRENCH V
IP**

**CN: LF50
Gifted: LF55**

**Gifted enrollment is limited to students in the
Gifted Program and must be approved by Gifted
Coordinator/GIEP**

Grade 12 36 wks. 1.0 credit
Advanced Placement

Prerequisite: French IV & Teacher Recommendation

This course continues to focus on the literature and perspectives of Francophone cultures. Students continue to master advanced grammar concepts with an emphasis on listening comprehension, speaking, writing, and reading skills. In-class discussion continues to be stressed. This course is designed to prepare students for the Advanced Placement examination given in the spring.

**GERMAN I
IP, VB
CN: LG10**

Grades 9-12 36 wks. 1.0 credit
Average/Above Levels

This course focuses on the German language through conversation, grammar, and vocabulary, with a recognition of the significant contributions of the German people to Western civilization. Reading, writing, listening, and speaking of the German language are also introduced.

**GERMAN II
IP, VB
CN: LG20**

Grades 9-12 36 wks. 1.0 credit
Average/Above Levels

Prerequisite: German I

This class continues the grammar introduced in German I with more intensive reading and

writing emphasized. The culture is further examined through music, stories, and films.

**HONORS GERMAN III
IP, VB
CN: LG30**

Grade 10, 11, or 12 36 wks. 1.0 credit
Honors Levels

Prerequisite: German II

This course is designed to continue the skills of listening, speaking, reading, and writing in the German language. The main goal of German III is communication in the target language.

**HONORS GERMAN IV
IP
CN: LG40**

Grade 11 or 12 36 wks. 1.0 credit
Honors Level

Prerequisite: German III

This course is designed to continue the skills of listening, speaking, reading, and writing in the German language. The main goal of German IV is to prepare students for advanced German studies.

**GERMAN V
IP
CN: LG50**

Gifted: LG55

**Gifted enrollment is limited to students in the
Gifted Program and must be approved by
Gifted Coordinator/GIEP**

Grade 12 36 wks. 1.0 credit
Advanced Placement

Prerequisite: German IV & Teacher Recommendation

Students will continue to develop their language skills as communication in German is emphasized. The course will also review

previously learned grammar and structures, and time will be given to the reading of texts and literature in the target language.

LATIN I
IP, VB
CN: LL10

Grades 9-12 36 wks. 1.0 credit
Average/Above Levels

In this course, students will comprehend the Latin language on a novice level through practice in reading, writing, and speaking. They will relate Latin to English vocabulary and compare the structure of both languages. In addition, students will develop and understanding of the history and culture of the Romans, especially during the First Century A.D. in Pompeii.

LATIN II
IP, VB
CN: LL20

Grades 9-12 36 wks. 1.0 credit
Average/Above Levels

Prerequisite: Latin I

Students read more complex Latin passages and further develop their Latin and English vocabulary and grammar skills. In this class, the readings focus on the Roman culture in Britain and Egypt in the First Century A.D.

HONORS LATIN III
IP
CN: LL30

Grade 10, 11, or 12 36 wks. 1.0 credit
Honors Level

Prerequisite: Latin II

In this course, students will refine their comprehension skills as they read increasingly longer and more complex passages of Latin. They will encounter more challenging grammar and writing exercises, and they will build their

English vocabulary through extensive study of Latin and Greek root words. The readings in this course focus on the Roman Army in Britain and on the political intrigues in the city of Rome during the reign of Domitian.

HONORS LATIN IV
IP
CN: LL40

Grade 11 or 12 36 wks. 1.0 credit
Honors Level

Prerequisite: Latin III

Students will read authentic Latin texts. An anthology of Latin writings will expand student knowledge and appreciation of Greek and Roman history and myth. The primary focus of this course is to enable students to demonstrate an ability to read, analyze, and critique authentic Latin literature. Students will be prepared for success in the Advanced Placement Latin course.

A.P. LATIN V
IP
CN: LL50

Gifted enrollment is limited to students in the Gifted Program and must be approved by Gifted Coordinator/GIEP

Grade 12 36 wks. 1.0 credit
Advanced Placement

Prerequisite: Latin IV and Teacher Recommendation

AP Latin students will develop the ability to translate the required passages from Caesar's *De bello Gallico* and Vergil's *Aeneid* into English, to understand the context of the written passages (including the political, historical, literary, and cultural background of each author and text), and to explore the reasons behind the particular style of writing and the rhetorical devices employed. The course will also help students to be successful in analyzing Latin passages to understand how and why the author uses the language in a particular way.

SPANISH I
IP, VB
CN: LS10

Grades 9-12 36 wks. 1.0 credit
Average/Above Levels

Spanish I presents an introduction to important vocabulary for everyday life and the basics of Spanish grammar and pronunciation through reading, writing, listening, and speaking. Personalized activities and cultural enlightenment lead students to relate Spanish to their own lives.

SPANISH II
IP, VB
CN: LS20

Grades 9-12 36 wks. 1.0 credit
Average/Above Levels

Prerequisite: Spanish I

Spanish II extends the opportunity to further develop basic reading, writing, listening and speaking skills while discovering more words and expressions for different life scenarios. Various cultural topics encourage the formation of positive attitudes toward the language and its people.

HONORS SPANISH III
IP, VB
CN: LS30

Grade 10, 11, or 12 36 wks. 1.0 credit
Honors Level

Prerequisite: Spanish II

Spanish III offers the opportunity to further express oneself in daily situations using the Spanish language and more advanced vocabulary and grammar skills. There is more focus on grammatical structure as the student continues

to reinforce listening, speaking, reading, and writing skills.

HONORS SPANISH IV
IP, VB
CN: LS40

Grade 11 or 12 36 wks. 1.0 credit
Honors Level

Prerequisite: Spanish III

Spanish IV provides students with the opportunity to focus on the real world applications of their skills. This course offers a continuing study of culture and more advanced vocabulary and grammar with an emphasis on reading, speaking, writing, and discussion skills.

A.P. SPANISH V
IP, VB
CN: LS50
Gifted: LS55

Gifted enrollment is limited to students in the Gifted Program and must be approved by Gifted Coordinator/GIEP

Grade 12 36 wks. 1.0 credit
Advanced Placement

Prerequisite: Spanish IV

AP Spanish Language and Culture is equivalent to an intermediate level college course in Spanish. Students cultivate their understanding of Spanish language and culture by applying interpersonal, interpretive, and presentational modes of communication in real-life situations as they explore concepts related to family and communities, personal and public identities, beauty and aesthetics, science and technology, contemporary life, and global challenges.

NOTES

TEST PREPARATION

INSTRUCTIONAL MODE KEY

IP: In-person

VB: Virtual Blended

VL: Virtual Live

VIRTUAL TUTOR

ACT

VB

CN: TPA30

Grade 11, or 12 18 wks. 0.5 credit

This course provides students with the opportunity to prepare to successfully complete the ACT college-entrance exam. Practice tests diagnose and target areas of opportunity, and students are prescribed individual study paths. The learning experience includes video-based instruction by highly qualified teachers, interactive assignments, and frequent assessment opportunities to track progress.

VIRTUAL TUTOR

SAT

VB

CN: TPS30

The test preparation course effectively prepares students for all sections of the SAT exam. Course content is broken into strands, allowing students to focus on each subject extensively before moving on to the next area of study. Within each strand, a diagnostic pretest identifies students' strengths and weaknesses and tailors a personalized study plan for each test-taker.

BUTLER COUNTY AREA VOCATIONAL-TECHNICAL SCHOOL

Butler County Area Vocational-Technical School offers programming in technical and mechanical, professional, service, and production occupations to eligible high school students residing in the Butler Area School District. Students who complete 9th, 10th or 11th grade may apply for admission to BCAVTS programs by submitting the *BCAVTS Application for Admissions* to their academic guidance counselor. **Please see www.butlertec.us, Guidance Office and New Student Admission Application for complete admission details.** Accepted students will spend a two-hour portion of their day involved in career and technical education at BCAVTS and the remainder of the day completing academic requirements at Butler Senior High School. The desire to learn, a cooperative work attitude, and the ability to profit from technical instruction are qualities needed to be a successful student in any of the programs. As a student at BCAVTS, the technical course work which includes cutting edge, rigorous and relevant curriculum will prepare students of all ability levels to enter an occupation, a post-secondary school, or the military. Each student's pathway to success is unique. BCAVTS can help you explore that pathway. Students considering enrollment at BCAVTS need to consider a number of personal factors including: career interests, academic abilities, social maturity, and specific career aptitudes.

Earning College Credit at BCAVTS: Students can earn advanced placement at various post-secondary institutions by taking advantage of *local articulation agreements* established by BCAVTS or by accessing *statewide articulation* credits for eligible students.

Local Articulation Agreements have been established with college and career schools throughout the region. Qualifying students have the opportunity to receive credits at specific institutions for learning achievements accomplished at BCAVTS. The number of credits awarded and specific requirements vary for each institution. Call the BCAVTS Guidance Office for the latest articulation information at 724-282-0735. See page 109-110 for details.

Statewide Articulation Agreements BCAVTS strives to prepare students for college and careers in a diverse, high-performing workforce. Beginning in the 2009-2010 school year, BCAVTS courses have become *program of study (POS)* courses which combine relevant, coherent, and rigorous technical education with aligned challenging academic standards. These career and technical *programs of study* include a statewide articulation agreement partnership between secondary schools and post-secondary institutions throughout Pennsylvania. To view current statewide articulation agreements, go to the equivalency search results for PA Bureau of Career and Technical Education at the website www.collegetransfer.net.

Numerous **certification** opportunities exist for BCAVTS students. A certification is a business and/or industry documentation verifying skills and knowledge in a specific area of study. These certifications may become increasingly important for advancement within a career area. NOCTI (National Occupational Competency Testing Institute) certification is offered to all students but Machine Technology students. Machine Technology students are offered NIMS (National Institute of Metalworking Skills) Certification. Many more **certifications** and **accreditations** are displayed in each Course Description in the next few pages.

Qualifying second and third year students may wish to consider participating in the **Cooperative Education** program. The program can provide a student the opportunity to be employed with his/her area of vocational-technical study and earn wages while under the supervision of the BCAVTS Cooperative Education Coordinator. All BCAVTS courses are eligible for participation, but students need to meet specific requirements, apply, and be accepted into the program. Cooperative Education guidelines established by the PA Department of Education and approved by the local area school districts will be followed.

BCAVTS has a school counselor who works cooperatively with Senior High school counselors in order to meet the needs of our students. Questions about specific programs of study at BCAVTS can be referred to the Butler Senior High school counselors or to the Guidance Office at BCAVTS (724) 282-0735.

AB/COLLISION REPAIR

CN: VAB21 (3 pds)

VAB22

Grades 10, 11, or 12 36 wks. 3.0 credit

A student in the AB/Collision Repair program will be introduced to careers centering on the replacement and repair of automobile and light truck bodies and body parts. New technologies that include a touch-mix computerized paint mixing system, resistance welder, aluminum welder, paint gun cleaner, paint recycling system, fresh air breathing system for the paint booth, hydraulic lift, and a cost estimating area will be used daily by students. Instruction utilizes the Inter-Industry Conference on Auto Collision Repair (I-CAR) curriculum presented through theory and application/practical skills with assessment of both portions reflected in each student's grade.

AIR CONDITIONING/ HEATING/ELECTRICAL

CN: VAC21 (3 pds)

VAC22

Recommended Academic Courses: Algebra I, II; Geometry; Precalculus; Chemistry (with lab); Physics; Technology Education

Grades 10, 11, or 12 36 wks. 3.0 credit

A student in the Air Conditioning, Heating, Electrical program will be introduced to careers centering on the installation, maintenance and repair of heating, ventilation, and air conditioning equipment. The student will also gain enough residential and commercial electrical knowledge to choose entrance to electrical/electrical skilled careers. Skills learned in the classroom will include working with compressors, relays, and thermostats, recovering and recycling refrigerants, learning related plumbing and electrical skills, fabricating sheet metal, following electrical and building codes, and installing, servicing, and maintaining residential or commercial heating, refrigeration, ventilation, and air conditioning systems.

AUTO TECHNOLOGY

CN: VAT21 (3 pds)

VAT22

Recommended Academic Courses: Algebra I, II; Geometry; Chemistry; Technology Education
Grades 10, 11, or 12 36 wks. 3.0 credit

A student in the Auto Technology program will be introduced to the highly technical careers centering on the repair of automobiles and light trucks. Rigorous evaluation by the National Automotive Technicians Education Foundation (NATEF) and the National Institute for Automotive Service Excellence (ASE) has resulted in program certification that assures employers standards of excellence in the areas of instruction, facilities, and equipment are met by BCAVTS. Skill areas include maintenance and light repair of brakes, heating, ventilation and air conditioning systems, automatic transmissions, and electrical/electronic systems for the first year and engine performance, engine repair, suspension and steering, and manual drive train/clutches for the second year of the program.

BUILDING CONSTRUCTION

CN: VBC21 (3 pds)

VBC22

Recommended Academic Courses: Algebra I, II; Geometry; Chemistry; Technology Education
Grades 10, 11, or 12 36 wks. 3.0 credit

A student in the Building Construction program will be introduced to careers in the residential and commercial building industry. Each student will receive training in carpentry, electrical, masonry, and plumbing. The students in Building Construction may participate in the annual construction of a complete home. Students who complete the program will receive certification from the National Center for Construction Education and Research (NCCER). Building Construction students are also eligible for Occupational Safety and Health Administration (OSHA) 10 certification as well as Caterpillar Forklift Operators certification.

CARPENTRY
CN: VCP21 (3 pds)
VCP22

Recommended Academic Courses:
Algebra I, II; Geometry; Chemistry; Technology
Education; Computer Applications
Grades 10, 11, or 12 36 wks. 3.0 credit

A student in the Carpentry program will be introduced to careers for general carpenters, wood workers, and fine cabinetmakers. Classroom learning will include measuring, use of power tools, use of hand tools, types of fasteners, types of adhesives, rough carpentry skills, cabinetmaking skills, blueprint reading skills, programming/operation of the CNC (computerized numerical control) lathe, router, lasers, and moving gantry router. Practical application includes fine cabinetmaking and working on construction of the modular home. The Carpentry program is accredited by the National Center for Construction Education and Research (NCCER).

COMPUTER NETWORKING
and
SECURITY
CN: VCN21(3 pds)
VCN22

Recommended Academic Courses: Algebra I, II; Geometry;
Precalculus; Chemistry (with lab); Physics;
Computer Applications; Technology Education
Grades 10, 11 or 12 36 wks. 3.0 credit

A student in the Computer Networking and Security program will be introduced to the creative technologies related to supporting and networking computer systems in both theory and direct application. The fundamentals of media, topologies, protocols, standards, network implementation, and network support will be presented. Problem solving and analytical skill development are taught and supported within the classroom structure. As an authorized Pearson/VUE Test Center, students are eligible to complete advanced industry certifications from CompTIA A+, Network +, and others right in their classroom.

COSMETOLOGY
CN: VCM21 (3 pds)
VCM22

Prerequisite: Following acceptance at the Butler Co. A.V.T.S., the student must complete enrollment procedures as required by the PA State Board of Cosmetology and purchase uniforms and equipment as prescribed by the school.

Recommended Academic Courses: Algebra I, II; Geometry;
Chemistry (with lab); Computer Applications
Grades 10, 11, or 12 36 wks. 3.0 credit

A student in the Cosmetology program will be introduced to the skills surrounding careers in the beauty industry. Competence in hair care, skin care, and nail care are obtained through learning techniques and practice on mannequins. Advanced practice on classmates and then clients will take place in the school's salon, Salon 7. All hours earned during daily class and evening class are applied to the 1250 hours of instruction needed for the PA State Board of Cosmetology State Board certification test. State licensing can be pursued once the required number of hours is obtained.

CULINARY ARTS
CN: VCA21 (3 pds)
VCA22

Recommended Academic Courses: Algebra I, II, Geometry;
Chemistry (with lab); Foods; Computer Applications
Grades 10, 11, or 12 36 wks. 3.0 credit

A student in the Culinary Arts program will work in areas such as dining room operations, cooking, bakeshop, and pastry making. Students will be expected to work individually, in groups, and in a professional kitchen brigade preparing food for the school's restaurant, The Eatery, to experience a wide range of learning experiences in keeping with industry expectations. The food service industry is one of the nation's largest employers, and job opportunities abound for preparation cooks, sous chefs, executive chefs, bakers, pastry chefs, and front of the house positions including wait staff, managers, and food and beverage directors. Students also have the opportunity to earn ServSafe Sanitation

certification, Nutrition Certification, Restaurant & Food Service Management Certification, Culinary Certification and Baking & Pastry Certification and a Certificate of Achievement from the American Culinary Federation.

GRAPHIC DESIGN
CN: VGD21 (3 pds)
VGD22

Recommended Academic Courses: Algebra I, II; Geometry; Chemistry (with lab); Art; Technology Education; Computer Applications

Grades 10, 11, or 12 36 wks. 3.0 credit

Graphic Design students will learn all the basic skills required in the field of visual communication: color theory, design, illustration, digital imagery, typography, multi-page layout and publication, advertising, and packaging, as well as electronic pre-press, silk screening, vinyl decal design and application, binding and finishing, and laser operations. This course will focus on developing creativity, increasing knowledge in all aspects of design including technical skills, problem solving skills as well as practicing appropriate interviewing skills. The Apple/PC software programs of Adobe InDesign, Adobe Photoshop, and Adobe Illustrator are utilized throughout the three-year course. Completing the required training and developing an artist's portfolio to display mastery of skills enables students not only to further their education, but to pursue entry level graphic design positions with advertising agencies, magazines, newspapers, and corporate communications departments.

HEALTH ASSISTANT

LEVEL I: ALL NEW STUDENTS USE

THIS NUMBER:

CN: VHA21 (3 pds)

VHA22

HEALTH OCCUPATIONS

LEVEL II: RETURNING STUDENTS

USE THIS NUMBER:

CN: VHO21 (3 pds)

VHO22

Recommended Academic Courses: Algebra I, II; Geometry; Chemistry (with Lab); Computer Applications

Grades 10, 11, or 12 36 wks. 3.0 credit

A student in the Health Assistant program will be introduced to the field of health care with an emphasis on direct patient care. Instructional areas will include: anatomy; physiology; medical terminology; infection control; emergency procedures; patient care; and technological advancements in patient care. The expanded overview of the health care field allows students to explore, refine, and choose an area of specialization in health care after field trips, job shadowing experiences, and clinical rotations are taken. Completers of the Health Assistant program will have the opportunity to earn the following certifications: CPR/AED, Feeding Assistant, Patient Care Technician, Electronic Medical Recorders, and Pharmacy Technician as well as college credits through Butler County Community College.

HEAVY EQUIPMENT

CN: VHE21(3 pds)

VHE22

Recommended Academic Courses: Algebra I, II; Geometry; Physics, Technology Education; Computer Applications

Grades 10, 11, or 12 36 wks. 3.0 credit

A student in the Heavy Equipment program will be introduced to maintenance and repair of medium/heavy duty trucks and construction equipment using state of the art lifts and computer diagnostic software. Students will be

given the opportunity to study a variety of repair scenarios on equipment, diesel and gasoline engine, transmissions, drivelines, differentials, steering and brake systems, as well as electrical, pneumatic, and hydraulic systems through both in-class learning and hand-on experience. Students have the opportunity to obtain Caterpillar Forklift Operators certification.

MACHINE TECHNOLOGY
CN: VMT21 (3 pds)
VMT22

Recommended Academic Courses: Algebra I, II; Geometry; Chemistry (with lab); Technology Education; Computer Applications

Grades 10, 11, or 12 36 wks. 3.0 credit

A student in the Machine Technology program will be introduced to the skills used in the precision metalworking industry. Students will be instructed on how to develop a process plan, how to produce and/or repair parts, how parts fit and work together, how to use a variety of metal working equipment, how to program and produce products on the computer numerical controlled (CNC) machines, and how to make accurate quality control inspections. Skills obtained in this area can secure a high-paying career in manufacturing as well as transfer into four-year college engineering degrees. Machine Technology offers nine nationally-recognized credentials through the National Institute for Metalworking Skills (NIMS) as well as up to 15 college credits from the Butler County Community College.

PROTECTIVE SERVICES
CN: VPS21 (3 pds)
VPS22

Recommended Academic Courses: Algebra I, II; Geometry; Chemistry (with lab); Computer Applications

Grades 10, 11 or 12 36 wks. 3.0 credit

A student in the Protective Services program will acquire knowledge and skills from the public

safety areas of firefighting, emergency medical services, vehicle, rope, and confined space rescue, as well as law enforcement. Students can expect to receive instruction; participate in practical applications and situational learning experiences; and prepare to test for national, state, and local certifications. Through exploration and physical practice of skills presented within the curriculum, students will be able to refine personal career opportunities and choose an area of specialization in public safety.

SPORTS MEDICINE
CN: VSM21 (3 pds)
VSM22

Grades 10, 11, or 12 36 wks. 3.0 credit

The purpose of the Sports Medicine Program is to provide students with a strong foundation in human anatomy, physiology, and introduction to clinical rehabilitation skills. Upon completion of the 3-year program, students will be competent in assisting patients with completing their therapeutic exercise program, monitoring vitals, and demonstrating proper body mechanics for weight-lifting and supervising patient mobility. Students will learn the principles of designing exercise programs for healthy individuals and athletes and how to develop proper diets through the basic principles of nutrition. They will also learn the impact of nutrition on athletic performance and disease processes. This program will provide students the opportunity to understand the available careers in health care, along with what prerequisites are necessary for admission into a post-secondary program or for further fitness certifications. Certifications:

- BLS Health Care Provider/American Heart Association
- Heartsaver First Aid/American Heart Association
- OSHA Occ Safety and Health Admin (OSHA)
- ACSM Personal Trainer
- AMCA Physical Therapy Aide
- CDC-Heads Up Concussion Training
- S/P2 Soft Skills

WELDING
CN: VWD21 (3 pds)
VWD22

Recommended Academic Courses:
Algebra I, II; Geometry; Chemistry (with lab); Physics;
Technology Education; Computer Applications
Grades 10, 11, or 12 36 wks. 3.0 credit

A student in the Welding program will be introduced to the application of technical knowledge and skills in shielded metal, gas tungsten, flux-core, and gas metal arc welding as well as brazing, flame cutting and plastic welding. Students learn safety practices, types and use of electrodes and welding rods, properties of metals, blueprint reading, electrical principals, welding symbols and mechanical drawing, Computer Numerical Control (CNC) programming, use of equipment for testing welds by ultrasonic methods and destruction and harness testing, use of manuals and specification charts, use of portable grinders for surface cleaning, positioning and clamping, and welding standards established by the American Welding Society and The American Petroleum Institute. Students are eligible for certification from the American Welding Society in mild steel, aluminum, and stainless steel.

DIVERSIFIED OCCUPATIONS
CN: VD021 (3pds)
VD022

Grades 12 36 wks. 3.0 credit

The diversified occupations program shall be available as a 1-year program for seniors only. Students who have found employment in a career field unrelated to BCAVTS offerings can participate in this work-based learning experience while earning credits toward graduation. The primary objectives of the Diversified Occupations program are to prepare students for employment in high priority occupations, successful employment, and lifelong learning through acquisition of high-level

academic, technical and career development skills. In addition, efficient work habits and attitudes about the personal, social, and economic significance of work will also be emphasized. The Diversified Occupations program is standards-based, prepares students for obtainment of licensure or industry skill certification or Pennsylvania Skills Certificate. The students in Diversified Occupations will complete the NOCTI assessment and receive a Certificate of Completion from the Pennsylvania Department of Education. Students in the Diversified Occupations program can earn the following certifications.

- o S/P2 Soft Skills
- o S/P2 Human Resources



**2020-2021
Certifications & Accreditations**

Program	Certifications Industry Recognized/Providers	Certifications Additional and/or Details to Industry Recognized/Providers	Accreditations
Air Conditioning/ Heating/Electrical Occupations <i>CIP Code: 47.0201</i>	<ul style="list-style-type: none"> ● Industry Competency Exam-Commercial Refrigeration/Air Conditioning & Refrigeration Institute ● Industry Competency Exam-Light Commercial Air Conditioning and Heating/Air Conditioning & Refrigeration Institute ● Industry Competency Exam-Residential Air Conditioning and Heating/Air Conditioning & Refrigeration Institute ● EPA 608 Refrigerant Recovery/ESCO Group ● Student Outcome Assessment/HVAC Excellence ● S/P2 Construction/S/P2 	<ul style="list-style-type: none"> ● ESCO Group <ul style="list-style-type: none"> - 609 Automotive ● Mainstream Engineering <ul style="list-style-type: none"> - 410A Safety Certification - Preventive Maintenance ● CSST Certification ● S/P2 Soft Skills 	
Automotive Technology <i>CIP Code: 47.0604</i>	<ul style="list-style-type: none"> ● AYES Certificate/Automotive Youth Educational Systems ● Section 609 Cert for Refrigerant Recycling and Recovery/Mobile Air Conditioning Society Worldwide ● NC3 Electronics/Electrical Certification/National Coalition of Certification Centers ● Automotive Service Excellence Cert (ASE)/Natl Automotive Technicians Education Foundation ● Certified Safety Inspector, Cat I/PA Department of Transportation ● Certified Safety Inspector, Cat II/PA Department of Transportation ● Certified Safety Inspector, Cat III/PA Department of Transportation 	<ul style="list-style-type: none"> ● A1-A8 & G1 under Automotive Service Excellence (ASE) ● Subaru Level 1 Technician ● S/P2 Soft Skills ● S/P2 Supervisor's Course 	<ul style="list-style-type: none"> ● ASE Education Foundation ● National Coalition of Certification Center (NC3) ● PennDOT

	<ul style="list-style-type: none"> ● S/P2-Automotive/S/P2 ● S/P2 Automotive Service Pollution Prevention/S/P2 ● Meter Certification/Snap-On ● Motor Oil Certification/Valvoline 		
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Program	Certifications Industry Recognized/Providers	Certifications Additional and/or Details to Industry Recognized/Providers	Accreditations
Building Construction <i>CIP Code: 46.9999</i>	<ul style="list-style-type: none"> ● Fork Lift Operator/National Safety Council ● NCCER Credentials (Various Trades)/Natl Ctr for Construction Educ & Research (NCCER) ● S/P2-Construction/S/P2 	<ul style="list-style-type: none"> ● AWPT in Arial Work Platforms ● All Terrain Telehandler ● Power Actuated Fasteners Certification ● S/P2 Soft Skills 	
Carpentry <i>CIP Code: 46.0201</i>	<ul style="list-style-type: none"> ● Fork Lift Operator/National Safety Council ● NCCER Credentials (Various Trades)/Natl Ctr for Construction Educ & Research (NCCER) ● S/P2 Construction/S/P2 	<ul style="list-style-type: none"> ● S/P2 Soft Skills 	

<p>Collision Repair</p> <p><i>CIP Code: 47.0603</i></p>	<ul style="list-style-type: none"> ● Automotive Lighting/I-CAR ● Bolted-On Exterior Panels-Part 1/I-CAR ● Bolted-On Exterior Panels-Part 2/I-CAR ● Hazardous Airborne Pollutant Reducation/I-CAR ● Hazardous Material Storage and Disposal/I-CAR ● I-CAR Certification(s)/I-CAR ● Intro to Collision Repair Process Overview/I-CAR ● Intro to Mechanical Repair Terms and Vehicle Protection/I-CAR ● Intro to Refinishing and Corrosion Protection-Part 1/I-CAR ● Intro to Refinishing and Corrosion Protection-Part 2/I-CAR ● Intro to Safety Systems/I-CAR ● Intro to Tools, Equipment and Attachment Methods-Part 2/I-CAR ● Intro to Tools, Equipment and Attachment Methods-Part 1/I-CAR ● Intro to Vehicle Parts Terminology-Part 1/I-CAR ● Refinishing Equipment/I-CAR ● Removing and Installing Exterior Trim, Pinstrips and Decals/I-CAR ● Removing and Installing Hardware Interior Trim/I-CAR ● Surface Preparation and Masking/I-CAR ● Vehicle Construction Material Types/I-CAR ● Section 609 Certification for Refrigeration Recycling and Recovery/National Institute for Automotive Service Excellence ● S/P2 Automotive Service Safety/S/P2 ● S/P2 Automotive Service Pollution Prevention/S/P2 ● S/P2 Collision Repair & Refinish Safety/S/P2 	<ul style="list-style-type: none"> ● ALLVIS (Laser frame measuring system) ● Aluminum Welding ● Mig Welding ● EPA Refrigerant Recovery (auto a/c) ● LORD Fusor® Bumper Repair ● S/P2 Soft Skills ● S/P2 Supervisor's Course 	<ul style="list-style-type: none"> ● I-CAR
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Program	Certifications Industry Recognized/Providers	Certifications Additional and/or Details to Industry Recognized/Providers	Accreditations
Computer Networking & Security <i>CIP Code: 11.0901</i>	<ul style="list-style-type: none"> ● A+/Computer Technology Industry Association ● IT Fundamentals+/Computer Technology Industry Association ● Network+/Computing Technology Industry Association ● Security+/Computing Technology Industry Association ● Network Pro/Test Out ● PC Pro/Test Out ● Security Pro/Test Out 	<ul style="list-style-type: none"> ● Server+ ● S/P2 Soft Skills 	
Cosmetology *PA Cosmetology State Board Licensure <i>CIP Code: 12.0401</i>	<ul style="list-style-type: none"> ● Cosmetologist/PA Dept of State, State Board of Cosmetology ● S/P2-Cosmetology/S/P2 	<ul style="list-style-type: none"> ● Academy Pro <ul style="list-style-type: none"> - Hair Extensions - Air Brush Makeup ● S/P2 Soft Skills 	

Program	Certifications Industry Recognized/Providers	Certifications Additional and/or Details to Industry Recognized/Providers	Accreditations
Culinary Arts *Retail Food Facility License <i>CIP Code: 12.0508</i>	<ul style="list-style-type: none"> ● Certified Culinarian (CC)/American Culinary Federation ● Certified Fundamental Cook (CFC)/American Culinary Federation ● ServSafe/Manager Food Safety Certification/National Restaurant Association ● ServSafe Food Handler Certification/ServSafe ● S/P2 Culinary/S/P2 	<ul style="list-style-type: none"> ● National Restaurant Association <ul style="list-style-type: none"> - On Cooking - On Baking ● American Culinary Federation <ul style="list-style-type: none"> - Intro to Hospitality-Food Service Industry - Intro to Hospitality-Baking & Pastry - Business & Math Skills - Food Prep - Garde Manager - Basic Baking - Bakery Planning & Preparation - Advanced Baking & Pastry - Basic Dining Room Service - Menu Planning - Purchasing & Receiving - Nutrition - Human Relations Management - Environmental Sustainability ● S/P2 Culinary-Food Safety ● S/P2 Soft Skills 	<ul style="list-style-type: none"> ● American Culinary Federation

Program	Certifications Industry Recognized/Providers	Certifications Additional and/or Details to Industry Recognized/Providers	Accreditations
Graphic Design <i>CIP Code: 50.0402</i>	<ul style="list-style-type: none"> ● Adobe Certified Associate-Visual Communication Using Adobe Illustrator/Certiport ● Adobe Certified Associate-Visual Communication Using Adobe Photoshop/Certiport ● Adobe Certified Associate-Graphic Design & Illustration Using Adobe Illustration/Certiport ● Adobe Certified Associate-Print & Design Media Publication Using Adobe Indesign/Certiport 	<ul style="list-style-type: none"> ● Adobe Certified Associate (ACA) for Adobe Photoshop CS5 and Adobe Illustrator ● S/P2 Soft Skills 	
Health Assistant/Health Occupations <i>CIP Code: 51.0899</i>	<ul style="list-style-type: none"> ● BLS Healthcare Provider/American Heart Association ● Heartsaver First Aid/American Heart Association ● Medical Assisting Clinical and Clerical/American Medical Certification Association ● Patient Care Technician/American Medical Certification Association ● Certified Clinical Medical Assistant (CCMA)/National Healthcareer Association ● Certified EKG/ECG Technician (CET)/National Healthcareer Association ● Personal Care Home Direct Care Staff Certificate/Pennsylvania Department of Human Services ● Billing and Coding Specialist/American Medical Certification Association ● Technician (CPhT)/National Healthcareer Association) 	<ul style="list-style-type: none"> ● Department of Health <ul style="list-style-type: none"> - Feeding Assistant ● National Restaurant Association Educational Foundation <ul style="list-style-type: none"> - Nutrition ● Dean Vaughn <ul style="list-style-type: none"> - Medical Terminology ● American Medical Certification Association <ul style="list-style-type: none"> - Nursing Assistant - Medical Administrative Assistant ● S/P2 Soft Skills 	<ul style="list-style-type: none"> ● American Medical Certification Association ● National Healthcareer Association

Program	Certifications Industry Recognized/Providers	Certifications Additional and/or Details to Industry Recognized/Providers	Accreditations
Heavy Equipment <i>CIP Code: 47.0613</i>	<ul style="list-style-type: none"> ● AYES Certificate/Automotive Youth Educational Systems ● Section 609 Certification for Refrigerant Recycling and Recovery/Mobile Air Conditioning Society Worldwide ● Automotive Service Excellence Certification (ASE)/Natl Automotive Technicians Education Foundation ● Certified Safety Inspector, Cat I/PA Department of Transportation ● Certified Safety Inspector, Cat III/PA Department of Transportation ● S/P2 Heavy Duty/S/P2 ● S/P2 Automotive Service Pollution Prevention/S/P2 	<ul style="list-style-type: none"> ● ASE Entry-Level Tests MEDIUM/HEAVY TRUCK ● Brakes ● Diesel Engines ● Electrical/Electronic Systems ● Suspension & Steering ● Basic Commercial Truck Tire Service ● Forklift Operator ● Meter Certification/Snap-On ● S/P2 Soft Skills 	
Machine Technology <i>CIP Code: 48.0501</i>	<ul style="list-style-type: none"> ● NIMS CNC Milling: Programming Setup & Operations/National Institute for Metalworking Skills, Inc ● NIMS CNC Turning: Programming Setup & Operations/ National Institute for Metalworking Skills, Inc ● NIMS Machining Level I/ National Institute for Metalworking Skills, Inc ● NIMS Machining Level I CNC Milling/ National Institute for Metalworking Skills, Inc ● NIMS Machining Level I CNC Turning/ National Institute for Metalworking Skills, Inc ● NIMS Machining Level I Manual Drill Press Operations/ National Institute for Metalworking Skills, Inc ● NIMS Machining Level I Manual Milling/ National Institute for Metalworking Skills, Inc ● NIMS Machining Level I Manual Surface Grinding/ National Institute for Metalworking Skills, Inc ● NIMS Machining Level I Manual Turning Between Centers/ National Institute for Metalworking Skills, Inc 	<ul style="list-style-type: none"> ● S/P2 Soft Skills 	<ul style="list-style-type: none"> ● NIMS (National Institute of Metalworking Skills)

	<ul style="list-style-type: none"> ● NIMS Machining Level I Manual Turning with Chucking/ National Institute for Metalworking Skills, Inc ● NIMS Machining Level I Measurement, Materials and Safety/ National Institute for Metalworking Skills, Inc ● NIMS Machining Level I Planning, Benchwork, Layout/ National Institute for Metalworking Skills, Inc. 		
Program	Certifications Industry Recognized/Providers	Certifications Additional and/or Details to Industry Recognized/Providers	Accreditations
Protective Services <i>CIP Code: 43.9999</i>	<ul style="list-style-type: none"> ● BLS Healthcare Provider/American Heart Association ● NIMS IS 100 Series/Emergency Management Institute ● NIMS IS 200 Series/Emergency Management Institute ● NIMS IS 700 Series/Emergency Management Institute ● NIMS IS 800 Series/Emergency Management Institute ● EMT/Pennsylvania Department of Health ● Certificate of Training-Basic Rigging for Rope Rescue/Pennsylvania State Fire Academy ● Certificate of Training-Basic Vehicle Rescue Awareness/ Pennsylvania State Fire Academy ● Certificate of Training-Basic Vehicle Rescue Operations/ Pennsylvania State Fire Academy ● Certificate of Training-Hazardous Materials First Responder Awareness/ Pennsylvania State Fire Academy ● Certificate of Training-PA Essentials of Firefighting/ Pennsylvania State Fire Academy ● Certificate of Training-Rope Rescue I/ Pennsylvania State Fire Academy ● Certificate of Training-Rope Rescue II/ Pennsylvania State Fire Academy ● OSHA Occ Safety and Health Admin/(OSHA) 	<ul style="list-style-type: none"> ● S/P2 Soft Skills 	
Sports Medicine <i>CIP Code: 51.2604</i>	<ul style="list-style-type: none"> ● CPR and AED/National Safety Council ● First Aid/National Safety Council 	<ul style="list-style-type: none"> ● ACSM Personal Trainer ● AMCA Physical Therapy Aide ● CDC-Heads Up Concussion Training ● S/P2 Soft Skills 	

<p>Welding</p> <p><i>CIP Code: 48.0508</i></p>	<ul style="list-style-type: none"> ● Certified Welder/American Welding Society ● Level I-Entry Welder/American Welding Society ● Level II-Advanced Welder/American Welding Society ● S/P2 Welding/S/P2 	<ul style="list-style-type: none"> ● ASME (American Society of Mechanical Engineers) ● D1.1 (Level I) <ul style="list-style-type: none"> ❖ FCAW Process ❖ SMAW Process ● ASME PLATE ● D1.5 Bridge (Level II) <ul style="list-style-type: none"> ❖ FCAW Process ❖ SMAW Process ● ASME PIPE (Level II/III) ● Schedule 80 (Uphill) ● API (American Petroleum Institute) 1104 Schedule 40 (Advanced) ● S/P2 Soft Skills 	
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**Butler County Area Vocational-Technical School
Articulation Agreements Approved by the Joint Operating Committee**

Institution	Butler County AVTS Program	Credits Received
<p>Butler County Community College P.O. Box 1203 Butler, PA 16001 724-287-8711</p>	<ul style="list-style-type: none"> ▪ Advertising Design ▪ Computer Networking ▪ Cosmetology ▪ Culinary Arts ▪ Graphic Arts ▪ Health Assistant/Occupations ▪ HVAC ▪ Machine Technology ▪ Protective Services ▪ NOCTI: - 6 technology elective credits will be awarded for the successful completion of NOCTI skill and written exams 	<ul style="list-style-type: none"> Up to 12 credits Up to 10 credits Up to 15 credits Up to 5 credits Up to 12 credits Up to 10 credits Up to 9 credits Up to 15 credits Up to 15 credits Up to 6 credits

<p>Career Training Academy 950 Fifth Ave. New Kensington, PA 15068 724-337-1000 www.careerta.edu</p>	<ul style="list-style-type: none"> ▪ Health Assistant 	Up to 15.5 credits
<p>Douglas Education Center 130 Seventh Street Monessen, PA 15062 724-684-3684 or 1-800-413-6013</p>	<ul style="list-style-type: none"> ▪ Cosmetology ▪ Advertising Design ▪ Graphic Arts 	<ul style="list-style-type: none"> ▪ Up to 18 credits ▪ Up to 9 credits ▪ Up to 9 credits
<p>Empire Beauty Academy 2394 Moutainview Dr. West Mifflin, PA 15122 1-412-653-2870 www.empire.edu</p>	<ul style="list-style-type: none"> ▪ Cosmetology 	Earn Cosmetology State Board Hours
<p>Erie Institute of Technology 940 Millcreek Mall Erie, PA 16565 1-814-868-9900</p>	<ul style="list-style-type: none"> ▪ Computer Networking/ Telecommunications 	Up to 4 credits

Fountain of Youth Academy of Cosmetology 108 Scharberry Lane Mars, PA 16046 724-624-3691	<ul style="list-style-type: none"> ▪ Cosmetology 	Earn Cosmetology State Board Hours
New Castle School of Trades 4164 US 422 Pulaski, PA 16143	<ul style="list-style-type: none"> ▪ Machine Technology 	Earn up to 1750 hours
Ohio Technical College 1374 E 51 st Street Cleveland, OH 44103 216-704-8868 www.ohiotech.edu Christine Granchie	<ul style="list-style-type: none"> ▪ Automotive Technology ▪ Collision Repair ▪ Heavy Equipment 	<ul style="list-style-type: none"> ▪ ASE/NATEF Certification Assistance ▪ Advanced Recognition for Automotive/ Collision Repair/Diesel Modules ▪ Continuing ASE Certification Preparation ▪ Opportunity to Continue Education in NATEF Accredited Programs w/ Reduced Cost
Pittsburgh Technical College 1111 McKee Rd. Oakdale, PA 15071 1-412-809-5100	<ul style="list-style-type: none"> ▪ Advertising Design ▪ Computer Networking/ Telecommunications ▪ Graphic Arts ▪ Health Assistant 	<ul style="list-style-type: none"> • Up to 5 credits • Up to 7 credits • Up to 8 credits • Up to 9 credits
Rosedale Technical Institute 215 Beecham Dr., Suite 2 Pittsburgh, PA 15205 1-412-521-6200	<ul style="list-style-type: none"> ▪ Automotive Technology ▪ Diesel Technology ▪ HVAC ▪ Welding 	<ul style="list-style-type: none"> • Up to 9 credits • Up to 9.5 credits • Up to 13 credits • Up to 3.5 credits

Triangle Tech, Inc. 1940 Perrysville Ave. Pittsburgh, PA 15214-9901 1-412-359-1000	<ul style="list-style-type: none"> ▪ Building Construction ▪ Carpentry ▪ HVAC ▪ Welding 	TBD 4.5 semester credits 12.5 semester credits 1006 hours/18 credits
Universal Technical Institute 601 Regency Drive Glendale Heights, IL 60139 1-630-893-2651	<ul style="list-style-type: none"> ▪ Automotive Technology ▪ Collision Repair 	TBD TBD
University of Northwestern Ohio 1441 N. Cable Rd. Lima, OH 45805 419-227-3141	<ul style="list-style-type: none"> ▪ Automotive Technology ▪ Air Conditioning/Heating 	<ul style="list-style-type: none"> ▪ Up to 12 credits ▪ Up to 6 credits

Informal Agreements

Institution	Butler County AVTS Program
Community College of Allegheny County 808 Ridge Ave. Pittsburgh, PA 15212 412-237-2511	<ul style="list-style-type: none"> ▪ Air Conditioning/Heating
Pennsylvania College of Technology One College Drive Williamsport, PA 17701 1-800-367-9222	<ul style="list-style-type: none"> ▪ Air Conditioning/Heating ▪ Carpentry ▪ Heavy Equipment Repair

NCAA FRESHMAN ATHLETIC ELIGIBILITY STANDARDS

For further information concerning eligibility, please contact your high school guidance counselor, the Butler Athletic Department, or reference your Athletic Handbook.

Important Telephone Numbers:

NCAA

Eligibility Center 877-622-2321

Online Registration: www.eligibilitycenter.org