BUCKS COUNTY TECHNICAL HIGH SCHOOL

"WHERE CAREERS BEGIN"

COURSE SELECTION BOOK

2021-2022

ACADEMIC & TECHNICAL OFFERINGS

BCTHS
BUCKS COUNTY TECHNICAL HIGH SCHOOL

Bucks County Technical High School is a campus of the
Bensalem, Bristol Borough, Bristol Township, Morrisville, Neshaminy, and Pennsbury School Districts

Revised: 01-11-2021

It is the policy of Bucks County Technical High School not to discriminate on the basis of race, color, religion, age, gender, sexual orientation, national origin, handicap/disability, genetic information or any other legally protected classification in its admissions, educational programs, activities or employment policies as required by Title VI of the Civil Rights Act of 1964, Title IX of the Educational Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, Age Discrimination Act of 1975, the Americans with Disabilities Act of 1990 and the Pennsylvania Human Relations Act. For information regarding services, activities and facilities that are accessible to and usable by handicapped persons and in compliance with Title VI, Title IX, Section 504 and Section 504, please contact the Human Resources Coordinator, Bucks County Technical High School, 610 Wistar Road, Fairless Hills, Pennsylvania 19030. 215-949-1700 x 2807.

Es la política de Bucks County High School secundaria técnica no para discriminar basándose en raza, color, religión, edad, género, orientación sexual, origen nacional, impedimento/discapacidad, información genética o cualquier otra clasificación protegida legalmente en sus admisiones, programas educativos, actividades o políticas de empleo según lo requerido por el título VI de la ley de derechos civiles de 1964, Título IX de las enmiendas educativas de 1972 , Sección 504 de la Rehabilitation Act de 1973, Ley de discriminación de edad de 1975, los americanos con acto de las inhabilidades de 1990 y la ley de las relaciones humanas de Pennsylvania. Para obtener información acerca de los servicios, actividades e instalaciones que son accesibles a y utilizables por personas con discapacidad y en cumplimiento del título VI, Título IX, sección 504 y la sección 504, póngase en contacto con la Coordinadora de recursos humanos, High School secundaria técnica de la Condado de Bucks, 610 Wistar camino, colinas de Fairless, Pennsylvania 19030. 215-949-1700 x 2807.

BCTHS
BUCKS COUNTY TECHNICAL HIGH SCHOOL

At Bucks County Technical High School, our mission is to prepare all students for careers, post-secondary education, and life-long learning, by providing knowledge and practical skills through high quality, integrated, standards-driven curriculum, access to current technologies, work-related experiences, and partnerships within the community.

College & Career Ready

ACADEMIC OFFERINGS

Grades 9, 10, 11, 12

Guide for Choosing Appropriate Course Level Recommendations:

A student's schedule for the school year will be completed based on the requests as indicated through the course selection in coordination with the student's current teachers. It is important that course selections be made with regard to the individual's needs, aptitude, ability, and interests.

Students are encouraged to consult with the guidance counselors, teachers, and parents with questions regarding the selection and continuation in any of the courses of study.

It is considered a good educational practice to establish standards for students who wish to continue to work in areas of specialized study. A grade of "C" is the minimal grade that a student may earn in order to be recommended for continued study in sequential subjects, which also requires the recommendation of the present teacher in that subject area.

Students are expected to remain in their selected courses for a full year. No lateral changes (change from the same class with a different teacher) are permitted. No adding or dropping of classes after October 15th will be permitted.

Students, parents, teachers, and counselors should agree to assure the greatest success for each student's assignments. Careful thought must be given to courses selected.

Instructors will be assigned students at the discretion of administration**.**

Graduation Requirements

Students must earn a minimum of 30 credits (7.50 per year) in the following areas:

4.0 - Language Arts	4.0 - Social Studies
4.0 - Math	2.0 - Health/Physical Education
4.0 – Science	12.0 - Vocational/Technical Core

As approved by the Joint Board, only those students who successfully complete all 30 credits as required for each curricular area will be permitted to walk in graduation; NOCTI testing must also be completed. A student who satisfactorily completes a special education program developed by an Individualized Education Program (IEP) team shall be granted and issued a high school diploma from Bucks County Technical High School.

***Courses marked with an asterisk following their course description are not approved by the NCAA Clearinghouse**

PLEASE NOTE: Students who plan on competing in college athletics at the Division II or above level are advised to register with the NCAA clearinghouse at the end of their junior year. You may also check the eligibility of any course by logging on to www.eligibilitycenter.org

Course selections may be changed based on enrollment in a course and teaching staff available to teach the course. Any changes affecting a course selected by a student will be communicated to the student and parent by a member of our Pupil Personnel Services Staff.

LANGUAGE ARTS

HONORS LANGUAGE ARTS 9
Grade Level: 9 18 Weeks 1.0 credit 5.0 Quality Points
This course will integrate all of the appropriate communication skills through a thematic approach. The course will challenge students through classical and modern literature and require a research paper each semester as well as quarterly benchmarks in preparation for the 10th grade Keystone Literature exam.

LANGUAGE ARTS 9 ACADEMIC
Grade Level: 9 18 Weeks 1.0 credit 4.0 Quality Points
Students will be placed in this course based on their scores on the placement test, writing sample and previous academic performance. Through a thematic approach, students will learn and apply skills in all areas of language arts. In addition to technical writing, students will be required to complete a research paper about their technical area of interest.

LANGUAGE ARTS 9
Grade Level: 9 18 Weeks 1.0 Credit 4.0 Quality Points
This course is designed to support and/or build upon the students' basic skills in English Language Arts. Students will read a fiction and non-fiction selection starting with short stories and excerpts of larger works. By the end of the course, students will read one full text drama and one novel as well as complete a short research paper in MLA format. Students will be expected to complete homework and short writing assignments independently throughout the year. *** This course is not approved by the NCAA Clearinghouse**

READ 180
Grade Level: 9 18 Weeks 1.0 Credit 4.0 Quality Points
Read 180 is a reading program designed for struggling readers who are reading below grade level. It works to build a student's reading comprehension, academic vocabulary, and writing skills. READ 180 includes whole-group instruction, followed by three small-group rotations. Small-group rotations include individualized instruction using an adaptive computer application, small-group instruction, and independent reading. *** This course is not approved by the NCAA Clearinghouse**

HONORS LANGUAGE ARTS 10
Grade Level: 10 18 Weeks 1.0 Credit 5.0 Quality Points
Prerequisite: "B" or better in Honors English 9 and recommendation of 9th grade English teacher
This course will integrate all of the appropriate communications skills through a thematic approach. The course will challenge students through classical and modern literature and require a research paper each semester.

LANGUAGE ARTS 10 ACADEMIC
Grade Level: 10 18 Weeks 1.0 Credit 4.0 Quality Points
Prerequisite: Recommendation of 9th grade English teacher
Through a thematic approach, students will learn and apply skills in all areas of language arts. In addition to technical writing, students will be required to complete a research paper in their technical field.

LANGUAGE ARTS 10
Grade: 10 18 Weeks 1.0 Credit 4.0 Quality Points
Prerequisite: None
Through a thematic approach, students will learn and apply skills in all areas of language arts. In addition to technical writing, students will be required to complete one research paper in their technical field.
*** This course is not approved by the NCAA Clearinghouse**

AP LITERATURE & COMPOSITION 11
Grade: 11 18 Weeks 1.0 Credit 5.5 Quality Points
Prerequisite: "B" or better in 10th grade Honors English
An AP English Literature and Composition course engages students in the careful reading and critical analysis of imaginative literature. Through the close reading of selected texts, students deepen their understanding of the ways writers use language to provide meaning and pleasure for their readers. As they read, students consider a work's structure, style, and themes, as well as such smaller scale elements as the use of figurative language, imagery, symbolism and tone. The AP test is a test paid for by the students and administered at the end of the school year in May.

HONORS LANGUAGE ARTS 11

Grade: 11 18 Weeks 1.0 Credit 5.0 Quality Points

Prerequisite: ***"B" or better in Honors English 10***

This course will integrate all of the communication skills including reading, writing, listening, and speaking through a thematic approach. This course is literature heavy and should be taken by students serious about attending college. Students should expect at least an hour's worth of homework each night. In addition to technical writing, students will be required to complete a research paper each semester. SAT preparation is included in this course.

LANGUAGE ARTS 11 ACADEMIC

Grade: 11 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Recommendation of the 10th grade English teacher

Through a thematic approach, students will integrate literary and technical reading and writing. Students will be required to complete one research paper. SAT preparation is included in this course.

LANGUAGE ARTS 11

Grade: 11 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Recommendation of the 10th grade English teacher

Through a thematic approach, students will integrate literary and technical reading and writing. Students will be required to complete one research paper. SAT preparation is included in this course.

*** This course is not approved by the NCAA Clearinghouse**

HONORS LANGUAGE ARTS 12

Grade: 12 18 Weeks 1.0 Credit 5.0 Quality Points

Prerequisite: "B" or better in 11th grade Honors English

This course will integrate all of the communication skills including reading, writing, listening, and speaking through a thematic approach. This course is intended for students who are serious about reading extended pieces of literature as well as writing on a regular basis. Students will be required to complete a research paper each semester. SAT preparation is included in this course.

LANGUAGE ARTS 12 ACADEMIC

Grade: 12 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Recommendation of the 11th grade English teacher

Through a thematic approach, students will integrate literary and technical reading and writing. Students will be required to complete one research paper. SAT preparation is included in this course.

LANGUAGE ARTS 12

Grade: 12 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Recommendation of the 11th grade English teacher

Through a thematic approach, students will integrate literary and technical reading and writing. Students will be required to complete one research paper. SAT preparation is included in this course.

*** This course is not approved by the NCAA Clearinghouse**

THEATER 12

Grade: 12 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Recommendation of the 11th grade English teacher

Theater is a form of universal communication understood throughout the world. When continuously reinforced, it will maximize an individual's potential as a life-long learner. The course will include problem-solving, cultural diversity, personal creativity and expressiveness, career opportunities from an acting, directing, and stagecraft perspective. Interactive participation is required.

*** This course is not approved by the NCAA Clearinghouse**

YEARBOOK 12

Grade: 12 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Recommendation of the 11th grade English teacher

The 12th grade yearbook course is an elective. As such, students will interview and construct an essay in order to gain entrance into this class. Comprehensive computer skills are necessary and include a working understanding of Adobe Photoshop, In-Design & Illustrator, among others. This class also requires a better-than-average understanding of photography including candid and portrait photos. Students are involved in the entire construction of the book from inception through completion. While in class, students may hold positions of responsibility and direct other students.

*** This course is not approved by the NCAA Clearinghouse**

HONORS WOMENS STUDIES 12

Grade: 12 18 Weeks 1.0 Credit 5.0 Quality Points

Prerequisite: Language Arts 11 Academic class with a B or better and Recommendation of the 11th grade English teacher

This course will integrate all of the communication skills including reading, writing, listening, and speaking through the thematic approach of not only the role of women in society, but also how sex and gender specifically plays major factors in how students perceive themselves and society. Focusing on mainly primary source documents, literature, and writing, students will be exposed to the historical and societal impact of other forms of media including film, television, art, advertisements, and political propaganda. Students should expect to have their thinking, assumptions, and ideas challenged and develop their critical thinking skills throughout the year as they come to critical understanding of gender, gender systems, gender role socialization, privilege, patriarchy, and institutions. The course is open to students of any gender in order for all to learn from each other and experience various points of view. Students will be required to complete a research paper and/or debate each semester.

WOMENS STUDIES 12

Grade: 12 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Language Arts 11 Academic class with a B or better and Recommendation of the 11th grade English teacher

This course is designed to take a non-biased approach to studying the role of women in society from pre-suffrage to today. Focusing on mainly literature and writing, students will be exposed to history and expression through various other forms of media including film, television, art, advertisements, and political propaganda. Students should expect to have their thinking, assumptions and ideas challenged and develop their critical thinking skills throughout the year as they come to critical understanding of gender, gender systems, gender role socialization, privilege, patriarchy, and institutions. This course is open to senior students of both genders in order for all to learn from each other and experience various points of view.

PUBLIC SPEAKING

Grade: 12 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Language Arts 11 Academic class with a B or better and Recommendation of the 11th grade English teacher

Through a variety of public speaking activities and speeches, students in this course will learn the basics of effective oral communication including use of voice, movement, eye contact, stories, and humor. Students will also learn how to prepare and use visuals. This course is open to senior students of both genders in order for all to learn from each other and experience various points of view.

THE SHORT STORY 12 - PAST AND PRESENT

Grade: 12 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Recommendation of the 11th grade English teacher

A short story is a piece of prose fiction that is usually under ten thousand words. This elective will review the history and development of the short story. During this course, a variety of activities will be used to read, write and evaluate various kinds of short literary works including mystery, western comedy, horror, gothic, romance, non-fiction, foreign, and children's short stories. Instructional strategies will include lecture, quiz/test, large and small group presentations in a variety of modes and independent reading and writing. Students will be able to identify and analyze short story elements, analyze theme, tone and literary devices, compose short stories in assorted genres, apply conventions of language and publish final products.

*** This course is not approved by the NCAA clearinghouse**

COLLEGE READING 12

Grade: 12 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Recommendation of the 11th grade English teacher

This introductory course is designed for seniors who are planning to attend college or post-secondary training and may potentially test into remedial reading courses in their freshman year. This course prepares students to read introductory college level material. Emphasis is on developing the ability to apply, monitor, and adjust reading strategies for increased understanding. Topics include comprehension and critical reading skills, vocabulary development, and basic college success skills. By writing short compositions, through a process of pre-writing, drafting, revising, and editing, students improve grammar and usage as well as composition development and organization.

*** This course is not approved by the NCAA Clearinghouse**

MATH

ALGEBRA 2 HONORS
Grade: 9 | 18 Weeks | 1.0 Credit | 5.0 Quality Points
Prerequisite: Successful completion of Algebra 1 with a "B" or better
This course is a detailed study of Algebra 2. The honors program is based mainly on the learning of functions and relations. Linear, quadratic, polynomial, inverse, radical, exponential and logarithmic functions are explored in depth. We conclude our course with an introduction to statistics and probability. Our goal is to prepare students for higher level mathematics such as Pre-Calculus, Calculus, and Statistics.

ALGEBRA 2 ACADEMIC
Grade: 9, 10 & 11 | 18 Weeks | 1.0 Credit | 4.0 Quality Points
Prerequisite: Successful completion of Algebra 1
This course is an extension of Algebra 1. Topics include irrational numbers, solutions to quadratic and higher degree equations, graphing, and solving linear and non-linear functions, the use of fractional and negative exponents, and exponential functions. A grade of "C" or better in Algebra 1 is recommended for success in this course.

ALGEBRA 1 ACADEMIC
Grade: 9 | 36 Weeks | 2.0 Credit | 4.0 Quality Points
This course studies the elementary translation of symbols and numbers into complete mathematical concepts. Topics include the use of the number line, manipulating variables, graphing linear equations, properties, solving multi-step equations and inequalities and focuses on the application of math problems. Students will need a TI-83 Plus or TI-84 Plus calculator.

ALGEBRA 1A/1B
Grade: 9 | 36 Weeks | 2.0 Credit | 4.0 Quality Points
This course is designed for the student who needs to take Algebra 1 over two semesters. It focuses on vocabulary, fundamentals, the tools of Algebra and real life applications. Students will need a TI-83 Plus or TI-84 Plus calculator.
*** This course is not approved by the NCAA Clearinghouse**

HONORS GEOMETRY
Grade: 10/11 | 18 Weeks | 1.0 Credit | 5.0 Quality Points
Prerequisite: "B" or better in Algebra 2 or Honors, and teacher recommendation
This course provides an in-depth study of the properties of basic geometric figures, such as: lines, planes, triangles, quadrilaterals, polygons, circles, and solids. In addition, mathematical reasoning and logic will be addressed leading to student developed proofs of geometric theorems. The course requires completion of a research paper and independent studies.

GEOMETRY ACADEMIC
Grade: 10/11 | 18 Weeks | 1.0 Credit | 4.0 Quality Points
Prerequisite: Academic Algebra 2 and teacher recommendation
A study of Euclidean Geometry, topics include perimeter, area and volume, the use of formulas, properties of circles, similarity, and informal proofs as applied to congruence, properties of polygons, and the use of Algebra skills to solve applied problems.

GEOMETRY
Grade: 10/11 | 18 Weeks | 1.0 Credit | 4.0 Quality Points
Prerequisite: Algebra 2 and teacher recommendation
A study of Euclidean Geometry, topics include perimeter, area and volume, the use of formulas, properties of circles, similarity, and informal proofs as applied to congruence, properties of polygons, and the use of Algebra skills to solve applied problems.
*** This course is not approved by the NCAA Clearinghouse**

ALGEBRA 2
Grade: 10/11 | 18 Weeks | 1.0 Credit | 4.0 Quality Points
Prerequisite: Successful completion of Algebra 1
Algebra 2 is an extension of Algebra 1. Topics include irrational numbers, solutions to quadratic and higher degree equations, graphing, and solving linear and non-linear functions, the use of fractional and negative exponents, and exponential functions. A grade of C or better in Algebra 1 is recommended for success in this course.

PRE-CALCULUS 11 HONORS

Grade: 11 18 Weeks 1.0 Credit 5.0 Quality Points

Prerequisite: Honors Algebra 2 and teacher recommendation

Pre-Calculus Honors is designed for the college-bound student. The purpose of this course is to prepare students for the study of calculus at an accelerated pace. The course includes a thorough study of algebraic concepts, functions and graphs, polynomial and rational functions, exponential and logarithmic functions, trigonometry, sequences and series, introduction to limits and calculus.

PRE-CALCULUS 11 ACADEMIC

Grade: 11 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Academic Algebra 2, Academic Geometry and teacher recommendation

The purpose of the course is to prepare the college-bound student for the study of calculus at an average pace. This course includes a thorough study of algebraic concepts, functions and graphs, polynomial and rational functions, exponential and logarithmic functions, trigonometry, sequences and series, limits and introduction to calculus.

AP Probability & Statistics 12

Grade: 12 18 weeks 1.0 Credit 5.5 Quality points

Prerequisite: Honors pre-Calculus and teacher recommendation

Curriculum for this course follows the AP Statistics curriculum set by the College Board and is designed to prepare students for the AP Statistics exam in May. Students will experience a rigorous year learning major concepts and tools for collecting, analyzing, and drawing conclusions from data. Also, students will learn key vocabulary to help them communicate their results of statistical studies. Furthermore, students will be participating in discussions, use online resources, conduct experiments and attempt a high number of practice problems essential for preparing them for the AP exam. Moreover, any student interested in taking this course should view the full course description available from www.collegeboard.com. Students will need a TI-84 Plus calculator.

CALCULUS AB HONORS 12

Grade: 12 18 Weeks 1.0 Credit 5.0 Quality Points

Prerequisite: Honors Pre-Calculus and teacher recommendation

Students enrolled in this course will study the branch of mathematics that deals with rates of change in continuous and varying quantities. The class will include exercises in the graphical, numerical, analytical, and verbal representations of functions, derivative rates of change and the use of derivatives to solve a variety of problems; and derivative and definite integrals as expressed in both parts of the Fundamental Theorem of Calculus. Students will communicate mathematical solutions both orally and with the written word; use technology to help solve problems, interpret results, and verify conclusions, and determine the reasonableness of solutions.

CALCULUS 12 ACADEMIC

Grade: 12 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Pre-Calculus and teacher recommendation

Students will study the branch of mathematics that deals with rates of change in continuous and varying quantities. The class will include exercises in the graphical, numerical, analytical, and verbal representations of functions, derivative rates of change and the use of derivatives to solve a variety of problems; and derivative and definite integrals as expressed in both parts of the Fundamental Theorem of Calculus. Students will communicate mathematical solutions both orally and with the written word; use technology to help solve problems, interpret results, and verify conclusions; and determine the reasonableness of solutions.

PRE-CALCULUS 12 HONORS

Grade: 12 18 Weeks 1.0 Credit 5.0 Quality Points

Prerequisite: Honors Algebra 2 and teacher recommendation

This course will prepare college-bound students for the study of calculus at an accelerated pace. The course includes a thorough study of algebraic concepts, functions and graphs, polynomial and rational functions, exponential and logarithmic functions, trigonometry, sequences and series, introduction to limits and calculus. A limited number of sections will be available.

PRE-CALCULUS 12 ACADEMIC

Grade: 12 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Algebra 2 and Academic Geometry and teacher recommendation

The purpose of the course is to prepare college-bound students for the study of calculus at an average pace. This course includes a thorough study of algebraic concepts, functions and graphs, polynomial and rational functions, exponential and logarithmic functions, trigonometry, sequences and series, limits and introduction to calculus.

PERSONAL FINANCE 12

Grade: 12 | 18 Weeks | 1.0 Credit | 4.0 Quality Points

***Prerequisite:* Teacher recommendation**

Students will learn how individual choices directly influence occupational goals and future earnings potential. Real world topics covered will include income, money management, spending and credit, as well as saving and investing. Students will design personal and household budgets using checking and saving accounts, gaining knowledge in finance, debt and credit management, and evaluating and understanding insurance and taxes. The class will incorporate the use of math skills to help make financially wise choices and major life purchases. Math for Personal Finance will provide a foundational understanding for making informed personal financial decisions leading to financial independence.

*** This course is not approved by the NCAA Clearinghouse**

SCIENCE

PHYSICAL SCIENCE 9 HONORS

Grade: 9 | 18 Weeks | 1.0 Credit | 5.0 Quality Points

Physical Science is a true interdisciplinary course combining concepts in chemistry and physics. The Physical Science course will include such topics in physics as energy, acceleration, momentum, forces, motion, machines, waves, electricity, and magnetism. The chemistry topics will include matter, atomic structure, the periodic table, chemical bonds, elements, and chemical reactions.

PHYSICAL SCIENCE 9 ACADEMIC

Grade: 9 | 18 Weeks | 1.0 Credit | 4.0 Quality Points

Physical Science provides students with a practical science course that will give them both the hands-on experience that industry demands and the fundamental problem solving skills that they will need to face the changing environment of their career fields. It applies physics principles to technological situations and concentrates on the use of physics formulas in the workplace rather than on their derivation or optimization. The format is unique because it introduces relationships of the four energy systems – mechanical, fluids, electrical and thermal. Students work primarily in small groups and practice their problem solving and mathematical skills while learning physics.

INTEGRATED SCIENCE 9

Grade: 9 | 18 Weeks | 1.0 Credit | 4.0 Quality Points

Integrated Science is an introductory level course designed to enable students to explore basic biological concepts in a laboratory setting. Students focus on concepts that are shared by all living things such as cell structure and function, biochemical make-up and interactions at the molecular level, and the interdependence that exists between organisms and their environments. Upon successful completion of this course students will move on to Biology 10 in their sophomore year.

*** This course is not approved by the NCAA Clearinghouse**

HONORS BIOLOGY 10

Grade: 10 | 18 Weeks | 1.0 Credit | 5.0 Quality Points

Prerequisite: Physical Science Honors or Physical Science Academic with a "B" or better and teacher recommendation

Designed for students planning to attend a 4-year college or university, this honors-level course takes an in-depth, systematic approach to the study of life on earth. Due to dynamic expansion of knowledge in this field, course study will move at an accelerated pace to enable study of both fundamental content and current research. The major topics focused on in this course include the study of living organisms, cellular biology, the history and diversity of life, ecology, microorganisms, vertebrate & invertebrate animals, and genetics. Emphasis is placed on the mastery of fundamental concepts and the processes of biology. Microscopy and lab dissections are an integral component of this course.

BIOLOGY 10 ACADEMIC

Grade: 10 | 18 Weeks | 1.0 Credit | 4.0 Quality Points

Prerequisite: Physical Science and teacher recommendation

This course uses an interdisciplinary approach to provide students with a functional knowledge of biology, focusing on the complex interactions of living systems. Concepts to be discussed include the organization of living things, cellular biology, body structures and functions, the principles of genetics and evolutionary change, as well as the interdependency of organisms with their environments and one another. Additional topics include current events and advances in the fields of research, medicine, and technology. Emphasis is placed on the development of critical thinking and research skills, as well as the understanding of complex relationships.

BIOLOGY 10

Grade: 10 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Integrated Science and 9th grade teacher recommendation

This fundamental biology course uses a practical approach to provide students with a basic knowledge of biology, focusing on how living things relate to our everyday life. Concepts to be discussed include the organization of living things, body structures and functions, the principles of evolutionary change, as well as the interdependency that exists between organisms and their environments and one another. Additional topics include current events in the fields of research, medicine, and technology. Emphasis is placed on the development and use of scientific methods, building research skills, as well as a basic understanding of relationships between living things.

*** This course is not approved by the NCAA Clearinghouse**

HONORS CHEMISTRY 11

Grade: 11 18 Weeks 1.0 Credit 5.0 Quality Points

Prerequisite: Honors Biology or Academic Biology with teacher recommendation

Review of Honors Physical Science topics - energy and matter, the structure of matter and go into greater depth with modern atomic theory and nuclear changes. Quantum theory and electron configurations, the periodic table, chemical formulas, bonding and molecular shape, stoichiometry, chemical equilibrium, acids and bases, redox chemistry, electrochemistry, chemical kinetics and thermodynamics, nuclear chemistry, biochemistry and organic chemistry.

CHEMISTRY 11 ACADEMIC

Grade: 11 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Academic or Honors Biology, taken or currently taking Academic Algebra 2

Review of Physical Science topics: energy and matter, the structure of matter and go into greater depth with modern atomic theory and nuclear changes, Quantum theory and electron configurations, the periodic table, chemical formulas, bonding and molecular shape and stoichiometry will also be covered. This course is recommended for students considering college and who have a strong background in math and problem solving.

CHEMISTRY 11

Grade: 11 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Biology

Chemistry – Foundations provides students with a basic knowledge of general chemistry concepts with less emphasis on higher order math skills. Key concepts include matter, atomic structure, the periodic table and periodic trends, bonding, chemical compounds and chemical reactions.

*** This course is not approved by the NCAA Clearinghouse**

PHYSICAL SCIENCE 11

Grade: 11 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Biology and teacher recommendation

Physical Science provides students with a practical science course that will give them both the hands-on experience that industry demands and the fundamental problem solving skills that they will need to face the changing environment of their career fields. It applies physics principles to technological situations and concentrates on the use of physics formulas in the workplace rather than on their derivation or optimization. The format is unique because it introduces relationships of the four energy systems – mechanical, fluids, electrical and thermal. Students work primarily in small groups and practice their problem solving and mathematical skills while learning physics. They learn to differentiate among different types of experimental, equipment and operator error by comparing the results of all teams. Explanation of what goes wrong is often more valuable in the work than knowing the ideal answer. This course introduces the concepts of physics and chemistry through frequent lab demos by the instructor and occasional small lab team practice. Math is used to analyze the data gathered in the lab.

***This course is not approved by the NCAA Clearinghouse**

HONORS PHYSICS 12

Grade: 12 18 Weeks 1.0 Credit 5.0 Quality Points

Prerequisite: "B" or better in all previous academic science and math courses, completion of or concurrent enrollment in Pre-Calculus or Calculus (preferred)

This class is intended for students who are planning to study a technical or engineering subject at a four-year college. The principles of mechanics are introduced via a math-based college freshman text. Labs and small group projects are utilized to explain real-world differences from the textbook 'pure' answers. This is not just a higher-level version of the Academic Physics course; the analytical depth and breadth is extensive.

PHYSICS 12 ACADEMIC

Grade: 12 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Academic Algebra 2, scored a "B" or higher in previous year's Academic Math and Science

Provides students with a practical science course that will give them both the hands-on experience industry demands and the fundamental problem-solving skills that they will need to face the changing environment of their career fields. It applies physics principles to technological situations and concentrates on the use of physics formulas in the workplace rather than on their derivation or optimization. The format is unique because it introduces relationships of the four energy systems - mechanical, fluids, electrical and thermal. Students work primarily in small groups and practice their problem-solving and mathematical skills while learning physics. They learn to differentiate among different types of experimental, equipment and operator error by comparing the results of all teams. An explanation of what goes wrong is often more valuable in the work world than knowing the ideal answer. Math is used to extend the understanding of the concepts. This course is recommended for students considering college.

HONORS ANATOMY & PHYSIOLOGY 12

Grade: 12 18 Weeks 1.0 Credit 5.0 Quality Points

Prerequisite: Honors Biology with a "B" or better and proficiency on the Biology Keystone exam.

How the human body maintains life by studying two major areas, anatomy, and physiology, is covered in this class. Students will learn the parts of major systems and the structure of each part which will be related to the function of each part and system in the study of physiology. The course will include discussions, projects, and lab activities. Students should be able to handle heavy vocabulary and reading and should have taken at least one year of biology. A limited number of sections will be available.

ANATOMY & PHYSIOLOGY 12 ACADEMIC

Grade: 12 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: "B" or better in Academic Biology, Academic Chemistry, teacher recommendation

Introduces students to the fundamental concepts and principles of human anatomy and physiology and will provide a foundation for advanced study of the human body based on microscopy, dissections, lectures, and demonstrations. Students should be able to handle heavy medical vocabulary and reading and should have received a "B" or better in Academic Biology. Dissections are a main learning component and are designed for students entering a 4-year college or entering health care disciplines. A limited number of sections will be available.

ADVANCED PLACEMENT ENVIRONMENTAL SCIENCE 12

Grade: 12 18 Weeks 1.0 Credit 5.5 Quality Points

Prerequisite: Honors Biology or Honors chemistry with at least a "B" average and proficiency on the Biology Keystone exam.

AP Environmental Science (APES) is a yearlong course that is the equivalent to a one-semester college level Environmental Science course that follows the objectives and conforms to the standards instituted by the College Board. This course will provide students with an understanding of how the natural world works, the interrelationships living things have with each other and with their environment, and how to identify environmental problems, natural and human-made. This course will also discuss legislation, both national and international, which is designed to protect the environment. Students are expected to take the AP Exam upon completion of the class.

ENVIRONMENTAL SCIENCE 12 Academic

Grade: 12 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Academic Biology & Academic Chemistry or Honors Biology

Designed to introduce students to the interdisciplinary field of environmental studies, students will be acquainted with a variety of environmental issues and the way various disciplines address these issues. Fieldwork in various ecosystems will be conducted. Field methods include but are not limited to orienteering, surveying plant and animal life and monitoring water quality within the local community. Students will use knowledge acquired from the field investigations affording them the opportunity to gain understanding of their own local environment. This course requires students to actively participate in on-going field studies. A limited number of sections will be available.

ENVIRONMENTAL SCIENCE 12

Grade: 12 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Biology and Chemistry

An introduction to environmental science that will provide the student with the basic knowledge needed to understand the nature of the environment and ecology globally. This course focuses on selected topics of environmental science as related to the protection, remediation and sustainability of land, air, water, and food resources. Emphasis will be placed on the use of the scientific method and critical thinking skills in understanding the structure and function of natural systems at scales from the individual to the biosphere and the complex interactions between humans and their environment. Discussions on human population growth, biodiversity, sustainability, resources use and pollution will be included. Lab exercises and fieldwork supplement the theory.

*** This course is not approved by the NCAA Clearinghouse**

SCIENCE & SOCIETY 12

Grade: 12 18 Weeks 1.0 Credit 4.0 Quality Points

***Prerequisite:* Recommendation of the 11th grade Science teacher**

This course explores many of the science-related issues facing society today: climate change, weather and storm events, green technologies, the changes in food and our dietary needs, food allergies, the business of developing and marketing food and nutrition products, nuclear medicine, nuclear weapons, nuclear power and oth er topics. New topics are explored as current events dictate. Students are encouraged to share their own experiences and expertise in those topics they've covered in their technical field and in other capacities.

*** This course is not approved by the NCAA Clearinghouse**

SOCIAL STUDIES

HONORS GLOBAL STUDIES 9

Grade: 9 18 Weeks 1.0 Credit 5.0 Quality Points

Global Studies focuses on the cultures and people around the world and on the major issues of the modern world. Students will learn about world geography, world religions and recent world history to better understand the cultural, historical and geographic causes behind modern world issues. In Honors, special emphasis will be placed on literature around the world and involves independent reading and writing.

GLOBAL STUDIES ACADEMIC 9

Grade: 9 18 Weeks 1.0 Credit 4.0 Quality Points

Global Studies focuses on the cultures and people around the world and on the major issues of the modern world. Students will learn about world geography, world religions, and recent world history to better understand the cultural, historical and geographic causes behind modern world issues.

GLOBAL STUDIES 9

Grade: 9 18 Weeks 1.0 Credit 4.0 Quality Points

Global Studies focuses on the cultures and people around the world and on the major issues of the modern world. Students will learn about world geography, world religions and recent world history to better understand the cultural, historical and geographic causes behind modern world issues. This course is not recommended for college bound students.

*** This course is not approved by the NCAA Clearinghouse**

ADVANCED PLACEMENT AMERICAN HISTORY

Grade: 10 18 Weeks 1.0 Credit 5.5 Quality Points

Prerequisite: Successful completion of the previous year's Social Studies class with an "A" or "B" average and recommendation of the Social Studies teacher who taught that particular class.

In AP U.S. History, students investigate significant events, individuals, developments, and processes in nine historical periods from approximately 1491 to the present. Students develop and use the same skills 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. The course also provides eight themes that students explore throughout the course in order to make connections among historical developments in different times and places: American and national identity; work, exchange, and technology; geography and the environment; migration and settlement; politics and power; America in the world; American and regional culture; and social structures. Students who complete this class and score well on the AP exam in the spring may qualify for credit in college.

HONORS AMERICAN HISTORY 10

Grade: 10 18 Weeks 1.0 Credit 5.0 Quality Points

Prerequisite: Successful completion of the previous year's Social Studies class with an "A" or "B" average and recommendation of the Social Studies teacher who taught that particular class.

Students will study American history from 1865 to the present. Particular attention will be paid to changes in the political, economic, social, and cultural aspects of American history. The goal of this course is to understand the development of the United States in the 20th Century. Special emphasis will be placed on primary sources, literature, historical debates, and the historical foundations of current national and international issues. Extensive reading and writing assignments should be expected.

AMERICAN HISTORY 10 ACADEMIC

Grade: 10 | 18 Weeks | 1.0 Credit | 4.0 Quality Points

Prerequisite: Successful completion of 9th grade Global Studies

Students will study American history from 1865 to the present. Particular attention will be paid to changes in the political, economic, social, and cultural aspects of American history. The goal of this course is to understand the development of the United States in the 20th Century. Independent, outside reading and writing assignments are required.

AMERICAN HISTORY 10

Grade: 10 | 18 Weeks | 1.0 Credit | 4.0 Quality Points

Prerequisite: Successful completion of 9th grade Global Studies

Students will study American history from 1865 to the present. Particular attention will be paid to changes in the political, economic, social, and cultural aspects of American history. The goal of this course is to understand the development of the United States in the 20th Century. Some independent, outside reading and writing assignments should be expected.

*** This course is not approved by the NCAA Clearinghouse**

ADVANCED PLACEMENT U.S. GOVERNMENT & POLITICS 11

Grade: 11 | 18 Weeks | 1.0 Credit | 5.5 Quality Points

Prerequisite: ***Successful completion of the previous year's Social Studies class with an "A" or "B" average and recommendation of the Social Studies teacher who taught that particular class***.

AP U.S. Government and Politics provides a college-level, nonpartisan introduction to key political concepts, ideas, institutions, policies, interactions, roles, and behaviors that characterize the constitutional system and political culture of the United States. Students will study U.S. foundational documents, Supreme Court decisions, and other texts and visuals to gain an understanding of the relationships and interactions among political institutions, processes, and behaviors. They will also engage in disciplinary practices that require them to read and interpret data, make comparisons and applications, and develop evidence-based arguments. Students who complete this class and score well on the AP exam in the spring may qualify for credit in college.

HONORS CIVICS & GOVERNMENT 11

Grade: 11 | 18 Weeks | 1.0 Credit | 5.0 Quality Points

Prerequisite: Successful completion of previous year's Social Studies class with an "A" or "B" average and recommendation of the Social Studies teacher who taught that particular class

The goal of this course is to give students a foundation and understanding of our democratic government and the active role citizenship plays in all areas of our civic life. Special focus will be placed on the foundations of citizenship, the creation of our government, the three levels of the government, and the American legal system. Students will be provided with an opportunity to conduct in-depth research and debate current issues in our society and in the world as well as encouraging them to critique or support current issues, laws, policies and constitutional issues. Independent reading and writing assignments should be expected.

CIVICS & GOVERNMENT 11 ACADEMIC

Grade: 11 | 18 Weeks | 1.0 Credit | 4.0 Quality Points

Prerequisite: Successful completion of 10th grade American History

The goal of this course is to give students a foundation and understanding of our democratic government and the active role citizenship plays in all areas of our civic life. Special focus will be placed on the foundations of citizenship, the creation of our government, the three levels of the government and the American legal system. Independent reading and writing assignments are required.

CIVICS & GOVERNMENT 11

Grade: 11 | 18 Weeks | 1.0 Credit | 4.0 Quality Points

Prerequisite: Successful completion of 10th grade American History

The goal of this course is to give students a foundation and understanding of our democratic government and the active role citizenship plays in all areas of our civic life. Special focus will be placed on the foundations of citizenship, the creation of our government, the three levels of the government, and the American legal system. Some independent reading and writing assignments should be expected.

*** This course is not approved by the NCAA Clearinghouse**

ADVANCED PLACEMENT PSYCHOLOGY 12

Grade: 12 18 Weeks 1.0 Credit 5.5 Quality Points

Prerequisite: Successful completion of AP Government with an "A" or "B" average or completion of Honors Government with an "A", as well as scoring Proficient or Advanced on the Language Arts Keystone Exam and recommendation of the Social Studies teacher who taught that particular class. Students who opted out of the Keystone Exam, must have completed either AP Government or Honors Civics with an "A" average and have the recommendation of the Social Studies teacher who taught that particular class.

AP Psychology is an introductory college-level psychology course. Students cultivate their understanding of the systematic and scientific study of human behavior and mental processes through inquiry-based investigations as they explore concepts like the biological bases of behavior, sensation and perception, learning and cognition, motivation, developmental psychology, testing and individual differences, treatment of abnormal behavior, and social psychology. AP Psychology can earn a student college credit by scoring well on the AP Exam that is given in May. Registering for the AP Exam is an expectation of the course. Solid reading and writing skills, along with a willingness to devote considerable time to homework and study are necessary to succeed.

HONORS PSYCHOLOGY 12

Grade: 12 18 Weeks 1.0 Credit 5.0 Quality Points

Prerequisite: Successful completion of the previous year's Social Studies class with an "A" or "B" average and recommendation of the Social Studies teacher who taught that particular class

In Honors Psychology, students will look at the individual human experience through physical, mental, and emotional processes. The foundation of this rigorous course is designed so the student can relate modern psychological studies to their daily lives in past, present and future life experiences. The class will focus on the methods of studying behavior, senses and perception, consciousness, sleep and dreams, intelligence and creativity, human development, conflict, stress and coping, mental disorders and treatment. This class will require considerable reading and writing both inside and outside the classroom.

PSYCHOLOGY 12 ACADEMIC

Grade: 12 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Successful completion of 11th grade Civics and teacher recommendation

The Psychology course is designed so students can relate modern psychological studies to their daily lives in past, present, and future life experiences. This subject looks at the individual human experience through physical, mental, and emotional processes. The course will focus on the methods of studying behavior, senses and perception, consciousness, sleep and dreams, intelligence and creativity, human development, conflict, stress and coping and mental disorders and treatment.

ECONOMICS 12 ACADEMIC

Grade: 12 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Students must have completed Academic Algebra 2.

The Academic Economics class is designed to teach students how to deal with the real-world problems they should expect to face over the course of their economic lives. Students will be combining the study of traditional Micro/Macro Economics while learning how to apply those lessons to their new comprehensive knowledge of global, political, and personal budgeting, banking and credit. Topics will include the role Micro/Macro Economics plays in global and personal credit, personal credit cards, loans, investments (401k, IRA, Stocks, etc.), homeownership and employment. Students should be prepared to study current domestic and foreign markets, structures and key economic indicators that trigger certain trends in the current intertwined world market and assess what these indicators and trends mean to them and their money. This course is designed to continually build on concepts throughout the year so that students will attain a firm grasp of the interconnectedness of economics and how it affects their own lives and the world around them.

MICRO/MACRO 12

Grade: 12 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Recommendation of the 11th grade Social Studies teacher

The Micro/Macro Economics course is designed to deal with real world problems every student should expect to face. The goal is to provide a basic understanding of the skills necessary for employment, banking, investing, property ownership and budgeting. A solid foundation of basic math skills, are required for tasks such as creating household budgets, calculating mortgage and loan payments, etc.

*** This course is not approved by the NCAA Clearinghouse**

HONORS MODERN AMERICAN MILITARY HISTORY 12

Grade: 12 18 Weeks 1.0 Credit 5.0 Quality Points

Prerequisite: Successful completion of 11th grade Social Studies with a grade of "B" or better and teacher recommendation.

This course focuses on the history and development of the United States military from World War II to the present day. Special attention is paid to the major conflicts of this time period, foreign policy, and the effects of peace time on the military. The class will focus on military science, major battles, weapons technology, and personalities that have shaped the American military. In addition, controversial issues and

topics related to the growth and development of the U.S. Military since World War II and the effects of those controversies on America as a whole will be analyzed. This class will require considerable reading and writing both inside and outside of the classroom.

MODERN AMERICAN MILITARY HISTORY 12 ACADEMIC
Grade: 12 18 Weeks 1.0 Credit 4.0 Quality Points
Prerequisite: Successful completion of 11TH grade Civics and teacher recommendation
This course focuses on the history and development of the United States military from the Civil War to the present day. In addition to studying major battles, weapons and personalities that have shaped the American military, students will also develop an understanding of American foreign policy, military strategy and the role technology has played in altering the strategies and structures of the American military.

SPANISH

SPANISH I
Grades: 9, 10 & 11 18 Weeks 1.0 Credit 4.0 Quality Points
Designed for the motivated college-bound student, Spanish I will concentrate on developing language skills and cultural awareness in order to communicate effectively in the language. Instruction includes communicative practice, small group activities and cultural oriented role play. Class participation and daily assignments are essential to this course. Students in 10th and 11th grade will be excused daily from their technical class to attend Spanish.

SPANISH II
Grades: 9, 10 & 11 18 Weeks 1.0 Credit 5.0 Quality Points
Prerequisite: Successful completion of Spanish I with a grade of "B" or better and have teacher approval
Designed for the motivated college-bound student, Spanish II concentrates on more in-depth development of language skills and cultural awareness. Greater emphasis is on reading, writing, listening and speaking in Spanish. Class participation is essential to this course. Students in 10th & 11th grade will be excused daily from their technical class to attend Spanish.

SPANISH III
Grades: 10 & 11 18 Weeks 1.0 Credit 5.0 Quality Points
Prerequisite: Successful completion of Spanish II with a grade of "B" or better or administrative approval
This course is designed for the motivated college-bound student and concentrates on improving students' language skills and cultural awareness in order to communicate effectively in the language. Instruction includes communicative practice, small group activities and cultural oriented role play. Class participation and daily assignments are essential to this course. Students will be excused daily from their technical class to attend Spanish.

PHYSICAL EDUCATION

PHYSICAL EDUCATION
Grades: 9, 10, 11 & 12 18 Weeks 0.5 Credit 4.0 Quality Points
This course is designed to facilitate students' interest in lifelong fitness. Students will be exposed to a wide variety of activities throughout their time at BCTHS including mountain biking, inline skating, adventure programs, fitness, self-protection, walking, Pilates, team sports, and many others. The goal is to create an atmosphere that is both enjoyable and educational, inviting students to participate in physical activities throughout their lifetime. Students will have one marking period of health each year in 10th and 11th grade. Topics covered will include healthy relationships, suicide prevention, drugs/alcohol/tobacco, and HIV & AIDS.

PHYSICAL EDUCATION BY CONTRACT
Grade: 12 School-to-Career/Cooperative Education Students Only
This program is designed to allow students, who are enrolled in the School-to-Career/Cooperative Education program, to earn Physical Education credit. Students are required to complete a contract prior to beginning the program and are required to complete an online assessment for each technical rotation.

ELECTIVES - BUSINESS

COMPUTER LITERACY

Grade: 9 18 Weeks 0.5 Credit 4.0 Quality Points

The purpose of the 9th grade computer technology course is to provide our students with the computer skills necessary to succeed academically, personally and professionally. Course content includes word processing, spreadsheets, presentations, desktop publishing, credible internet research, email data management and more. This is a hands-on, project-based class in which computers are used daily.

*** This course is not approved by the NCAA Clearinghouse**

WRITING SEMINAR

Grade: 9 18 Weeks 0.5 Credit 4.0 Quality Points

Through writing short compositions in a variety of genres, students will engage in the writing process of prewriting, drafting, revising, and editing. Students will improve composition development, organization, grammar, and mechanics through this process. This course will prepare students for writing needs in the technical and upper-level academic classes.

*** This course is not approved by the NCAA Clearinghouse**

SEMINAR

Grade: 9 18 Weeks 0.5 Credit 4.0 Quality Points

This course is designed to help students develop and use study/organizational skills that will help them become successful learners. Students will learn various techniques that will be helpful to them throughout their academic years including setting goals, organization, time management, and study skills. In this course, students will also have a chance to work on their academic classwork and monitor their progress in their other classes.

*** This course is not approved by the NCAA Clearinghouse**

ACCOUNTING & BUSINESS APPLICATIONS

Grade: 12 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Successful completion of Algebra 2 with a "C" or better.

The accounting section of the course will provide students with an introductory level understanding of accounting. There are two main parts of the accounting section - the first part is a discussion of the most important financial statements used in accounting, how to read each one, as well as what lessons can be learned from each; the second part focuses on Generally Accepted Accounting Principles (GAAP). The business applications section of the course will take students through the process of developing a business plan. Through the integration of various technologies, students will analyze the impact that marketing, planning, financial management, data analysis, communication, etc., will have on the business world and their lives. This is a hands-on course which will use computers on a daily basis.

*** This course is not approved by the NCAA clearinghouse**

OWNING YOUR OWN BUSINESS

Grade: 12 18 Weeks 1.0 Credit 4.0 Quality Points

Prerequisite: Successful completion of Algebra 2 with a "C" or better

The Business Awareness and Entrepreneurship section of this course takes students through the process of owning a small business. Through the integration of various technologies, students will analyze the impact that marketing, advertising, planning, financial management, budgeting, researching, data analysis, managing and communication has on the business world and their personal lives. Microsoft Office is incorporated using Word, Excel, Publisher and Power Point.

Throughout the course, skill assessment and simulations, using real-life examples with an emphasis on business applications and personal finance, will be utilized to teach the skills which most employers, colleges and universities require. Students will be able to identify the capabilities and limitations of differing business models in order to assess the potential of these approaches to address personal, lifelong and workplace needs. This is a hands-on course which will use computers on a daily basis.

*** This course is not approved by the NCAA Clearinghouse**

TECHNICAL OFFERINGS

ALLIED HEALTH

This college level cluster program provides a sequence of secondary technical core and academic courses in a program of study. Students will learn to apply knowledge and skills in a variety of healthcare settings. The competencies outlined cover the specific areas of instruction for the program. Clinical education is an integral part of the program. Science and math courses taught by certified teachers will be coordinated and deemed essential for students to successfully reach their career objectives and post-secondary education.
The ideal healthcare worker for any Allied Health career should possess the following traits as identified in the PA Career Guide: Attention to detail, excellent oral and written communication, emotional stability and maturity, computer skills and critical thinking. Math and science skills are important in most allied health occupations. A passion for the profession and caring for people is important.

Certifications available to the successful Allied Health student include:

- CareerSafe/OSHA
- Healthcare Provider BLS
- Heartsaver AED, CPR & First Aid
- Nurse Aide Registry
- OSHA Certification

APPLIED ENGINEERING TECHNOLOGIES (AET)

Computer Systems Technology

Computer Systems Technology will prepare students to apply basic engineering principles and technical skills in support of professionals who use computer systems. This program includes instruction in basic computer design and architecture, programming, problems of specific computer application, component and system maintenance and inspection procedures, hardware and software problem diagnosis and repair and report preparation. In addition, network and computer systems administrators are responsible for the day-to-day operation of an organization's computer network. Students will learn how to organize, install, and support an organization's computer systems, including local area networks (LANs), wide area networks (WANs), network segments, intranets, and other data communication systems. Employment of network and computer systems administrators is expected to grow 28% faster than the average for all occupations. Demand for these workers is high and should continue to grow as firms invest in newer, faster technology and mobile networks.

***Certifications available to the successful Computer Maintenance & Networking Technology student include*:**

- A +
- CareerSafe/OSHA
- Certified Electronics Technician Associate (CETa)
- Heartsaver AED, CPR & First Aid
- Microsoft Certified Professional (MCP)
- Network +
- OSHA Certification
- Security +
- Server +

Electronics/Green Energy Technologies

The Green Energy Technologies program is fully committed to train and certify the large number of green collar workers required worldwide to overcome the clean energy challenges of the 21st Century. Through local business partner networks of industry-aligned education, we will empower blue to white collar workers to drive their careers forward in the green economy.
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***Certifications available to the successful Electronics/Green Energy Technologies student include*:**

- CareerSafe/OSHA
- OSHA Certification
- Certified Electronics Technician Associate (CETa)
- HeartsaverAED, CPR & First Aid
- Student Electronics Technician (SET)

Mechatronics Technologies

Mechatronics Engineering Technologies introduces state-of-the-art technology that is used in today's high-tech manufacturing industries. Integrated systems will prepare students for post high school education and/or future occupations by giving them career, business, and technical knowledge. Students aspiring to become engineers and technicians will learn the essential skills needed to prepare for the high performance manufacturing workplace of the 21st Century.

Students will gain skills and the knowledge needed for a career in design engineering as they learn each aspect of the design process. Graphic design also includes use of advanced 2D and 3D CAD as well as parametric design software. Solid works and inventor software is also used. Students will learn quality control, electricity/electronics, mechanical systems, automation and material handling, and manufacturing processes.

***Certifications available to the successful Mechatronics Engineering Technologies student include*:**

- CareerSafe/OSHA
- Certified Electronics Technician Associate (CETa)
- Heartsaver AED, CPR & First Aid
- Microsoft Office Specialist – Microsoft Word – Expert Level (2000, XP, 2003)
- OSHA Certification
- PMMI
- Student Electronics Technician (SET)

AUTOMOTIVE TECHNOLOGY

Advancements in automobile safety, fuel management and comfort have led to an increasing reliance on computers and electronic components that make cars operate efficiently. Today's auto technicians must be well-educated and continue training to stay on the cutting edge of advances in computer and electronic technology. They also must be skilled in all aspects of mechanical repair procedures and knowledgeable about service intervals and similar maintenance requirements on a wide variety of vehicles.

The need for technicians to understand electrical/electronics, is going to be one of the most important skills in vehicle repairs today. Students will have hands-on practices with digital multi meters, test lights, lab scopes, and a variety of scan tools. Students will learn and understand OHMS law application, voltage, amperage, and current. In addition, the proper way to test and service batteries, starters, and charging systems will be taught. Lighting systems, gauges and electrical accessories are also included in this program.

Students will complete 230 hours of engine performance discipline and will experience hands-on practices with special tools and equipment to understand the general engine diagnosis, computer engine controls, ignition systems, fuel, air, and exhaust systems.

***Certifications available to the successful Automotive Technology student include*:**

- ASE (Automotive Service Excellence Certification)
- AYES Certification
- Certified Emissions Inspector
- Certified Safety Inspector, Cat 1
- Section 609 Certification for Refrigerant Recycling & Recovery
- OSHA Certification
- PA Emission Certification
- PA Safety Inspection License
- S/P2
- Heartsaver AED, CPR & First Aid

BAKING & Pastry Arts

The Baking & Pastry Arts curriculum provides theoretical and practical knowledge for students to become professional bakers, cake decorators or bakery managers. Students will learn basic food technology, study preparation of breads, sweet goods and decorating in classroom and laboratory. Students learn procurement, costing, pricing and other elements of retail marketing and management. Graduates can find employment in bakeries, restaurants and institutions or go on to college studies in food technology or as a pastry chef.

***Certifications available to the successful Baking & Pastry Arts student include*:**

- CareerSafe/OSHA
- Pennsylvania Food Employee Certification (ServSafe, etc.)
- OSHA Certification
- Heartsaver AED, CPR & First Aid

ENTREPRENEURSHIP AND SMALL BUSINESS DEVELOPMENT

The Entrepreneurship & Small Business Development program prepares students for self-employment and career opportunities in small businesses while fostering the student's entrepreneurial mindset. Students enrolled in this program will learn how to evaluate small business plans and marketing opportunities, technical and management skills, and broad accounting skills, while understanding the resources necessary to start a business. Students will utilize a variety of computer applications and programs necessary for today's ever changing workforce. An emphasis on employability and soft skills will allow for an easy transition once students graduate from the program. There is high demand for skills related to the curriculum provided. This is an excellent foundation for direct entrance into today's workforce while still giving students the opportunity to pursue post-secondary education. It is directly focused on the practical, hands-on aspects of small businesses with many opportunities for real-world application with our numerous student run businesses on campus. Students will be immersed in real world application of skills while participating in our various student run businesses: Tasty Tech Cafe, Bear Claw Goods, Career Consultation Services, Student Activities Office and participation in their own virtual business during their junior and senior year. Our curriculum is enhanced by participation in both DECA and Virtual Enterprise International, which are nationally recognized affiliations.

Certifications available to the successful Entrepreneurship & Small Business development student include:

- OSHA Certification
- S/P2 Human Resources
- S/P2 Soft Skills
- MOS Word
- MOS PowerPoint
- MOS Publisher
- MOS Excel
- National Retail Federation
- Small Business Administration
- Stukent - Social Media Marketing
- EverFi- Personal Finance, Entrepreneurship
- ServSafe Food Handler
- ACT National Career Readiness

CARPENTRY

The Carpentry program prepares students to apply knowledge and technical skills in carpentry fields. The areas of study include: construction safety, hand and power tools, estimating, blueprint reading, materials and fasteners, site layout, concrete forms, rough framing, exterior and interior finish, weatherization and green technology in construction. Students are encouraged to develop strong math and communication skills.

Certifications available to the successful Carpentry student include:

- CareerSafe/OSHA
- Green and Weatherization Certification
- Heartsaver AED, CPR & First Aid
- NCCER Credentials
- OSHA Certification

CHILD DEVELOPMENT & EARLY LEARNING

The CDEL (Child Development and Early Learning) program is designed for students who have a sincere desire to teach and care for young children. It prepares students for either an entry-level position in the child care industry or to pursue a college degree in early childhood education or elementary education. Students will spend approximately 100 hours per year observing and working with preschool children in local licensed child care centers. Students will observe different styles of teaching and different philosophies of education. Students will rotate through classrooms with children ranging in age from 3 months- 6 years and apply knowledge learned in class to practical situations in the preschool settings.

Certifications available to the successful Child Development & Early learning student include:

- PA and NOCTI Skills Certificates
- Pediatric CPR and First Aid
- CDA (Child Development Associate) *Ready Certification*
- NIMS Children in Disaster Certificate
- OSHA Certification

CIVIL ENGINEERING TECHNOLOGY

Students learn the basics of surveying, land improvement and building in Civil Engineering Technology. Studies include mathematics, physics, civil drawing, blueprint reading, coordinate geometry, storm water management, environmental engineering office procedures is combined with extensive laboratory, drafting and fieldwork. Graduates can obtain employment on surveying or construction teams in private or public practice or earn a college degree in Civil Engineering.

Certifications available to the successful Civil Engineering Technology student include:

- AutoCAD Civil 3D
- AutoCAD 2012
- CareerSafe/OSHA
- Heartsaver AED, CPR & First Aid
- OSHA Certification

COLLISION REPAIR TECHNOLOGY

Students will study automotive design and construction. Laboratory work includes surface preparation, panel replacement, welding, detailing and painting. Students are trained in estimating, costing and scheduling. As "smart" vehicles rely more on sophisticated systems, highly trained collision repair technicians will find employment not only in automotive sales and repair facilities, but also in insurance, information management and related occupations. Students will be exposed to “hands on” live work that is the equivalent of the work found in repair centers. The program will also afford students the chance to work on special projects that range from police vehicles to a variety of race cars.

Certifications available to the successful Collision Repair Technology student include:

- ASE Certification
- CareerSafe/OSHA
- Heartsaver AED, CPR & First Aid
- Section 609 Certification for Refrigerant Recyling & Recovery
- OSHA Certification
- S/P2
- ICAR Points

COMMERCIAL & ADVERTISING ARTS CLUSTER

Commercial Art & Illustration, Digital Photo & Imaging & Graphic Arts & Printing

This course is designed to specifically offer direction for students who wish to pursue a substantially creative, conceptual and editorial approach to their visual portfolio. The blended course work in Commercial Art, Digital Photography /Imaging and Graphic Arts/Printing, prepares the student to apply their technical knowledge and skill obtained in these combined programs to the advertising arts industry and/or to pursue a post-secondary education in art and design.

This cluster specifically includes instruction in hand drawing, illustration, color theory, digital imaging, design layout, print production, typography, digital photography and professional career preparation as it is aligned with the Pennsylvania Department of Education's Program of Study for Commercial and Advertising Art PA.

An introduction to the commands and functions of Adobe Photoshop, Illustrator and InDesign will be studied throughout the entire span of the student's enrollment within the cluster. These sets of skills will not only boost the composition and dynamic imagery in the student's comprehensive portfolio, but will also provide the student an opportunity to explore additional markets in the digital arts arena.

Certification opportunities available to the successful Commercial & Advertising Arts Cluster student include:

- Adobe Certified Associate-Visual Communication
- CareerSafe/OSHA
- Certificate of Completion, Certification, Certification of Distinction
- OSHA Certification
- PrintED Certification
- Heartsaver AED, CPR & First Aid

COSMETOLOGY

The Pennsylvania State Board of Cosmetology requires 1250 hours of training for operators and cosmetology students receive much more than just the minimal requirements for licensing. Classroom and salon work provides in-depth training in all hair, skin, and nail techniques. Upon completion of the curriculum, students will be adequately prepared to take the State Board theory and practical examination.

Certifications available to the successful Cosmetology student include:

- CareerSafe/OSHA
- Cosmetologist
- Heartsaver AED, CPR & First Aid
- Manicurist
- OSHA Certification

CULINARY ARTS

Culinary Arts instruction begins with basic food technology, nutrition and menu planning. Kitchen and dining room operations in classroom, laboratory, and serving areas cover portion control, food and beverage control, procurement, costing and pricing. Graduates can find wide employment in the retail food, hospitality and tourism industries as well as in institutional fields, or go on to college studies in nutrition, food technology or hotel management.

Certifications available to the successful Culinary Arts student include:

- CareerSafe/OSHA
- Certified Culinarian (CC)
- Heartsaver AED, CPR & First Aid
- OSHA Certification
- Pennsylvania Food Employee Certification (ServSafe)

DENTAL HEALTH CAREERS

Students enrolled in Dental Health Careers will study basic anatomy, physiology, pharmacology, bacteriology, medical and dental terminology. Classroom and laboratory work will cover X-ray technique, sterilization and chair side assisting. Instruction is provided in office procedures including dental records, insurance and scheduling.

Dental Health Careers prepares students with the basic foundation to pursue the many dental specialties available. Most of our students continue their education in colleges majoring in such programs as Dental Hygiene, Expanded Function Dental Assisting (EFDA), and Pre-Dentistry.

***Certifications available to the successful Dental Health Careers student include*:**

- CareerSafe/OSHA
- CPR for Family & Friends
- Heartsaver AED, CPR & First Aid
- OSHA Certification
- Radiation Health & Safety (RHS)

DIESEL TECHNOLOGY

Diesel Technology students study basic mathematics, physics and operating principles of the diesel cycle and will become familiar with tools, test instrumentation and shop equipment. In the classroom and laboratory, students learn engine disassembly and diagnosis using highly sophisticated test equipment. Expertise is developed in troubleshooting, repair, overhaul and tune-up of engines, cooling, and electrical systems. Graduates can find employment opportunities or proceed to a college degree in diesel engineering.

***Certifications available to the successful Diesel Technology student include*:**

- Automotive Service Excellence Certification (ASE)
- CareerSafe/OSHA
- Certified Emissions Inspector
- Certified Safety Inspector, Cat I
- Certified Safety Inspector, Cat III
- Section 609 Certification for Refrigerant Recyling & Recovery
- Heartsaver AED, CPR & First Aid
- OSHA Certification
- Outdoor Power Equipment Technician Certification
- S/P2

ELECTRICAL OCCUPATIONS TECHNOLOGY

Students enrolled in Electrical Occupations Technology are introduced to basic physics and mathematics; learn the principles of DC and AC circuits and how to interpret construction plans and electrical diagrams. They will receive detailed practical instruction in residential, commercial and industrial applications and troubleshooting including wiring, metering, security systems, motors and controls. This comprehensive training prepares them to become journeymen electricians or progress to a degree in electrical engineering. After successfully completing this course, students will receive a one-year credit toward the evening apprenticeship program offered by BCTHS.

***Certifications available to the successful Electrical Occupations Technology student include*:**

- C-Tech Certifications
- CareerSafe/OSHA
- Heartsaver AED, CPR & First Aid
- OSHA Certification

EMERGENCY SERVICES TECHNOLOGY

Emergency Services Technology prepares students to apply technical knowledge and skills required to perform entry-level duties as a police officer, fire fighter, paramedic and other safety services. This program stresses the techniques, methods and procedures particular to the areas of criminal justice and fire protection especially in emergency and disaster situations. Physical development and self-confidence skills

are emphasized due to the nature of the specific occupation(s). In addition to the application of mathematics, communication, science and physics, students receive training in social and psychological skills, map reading, vehicle and equipment operations, the judicial system, pre-hospital emergency medical care and appropriate emergency assessment, treatment and communication.

***Certifications available to the successful Emergency Services Technology student include*:**

- Automated External Defibrillation (AED)
- Certificate of Training – Incident Command System
- Certificate of Training – PA Essentials of Firefighting
- Certificate of Training – Recognition and Identification of Hazardous Materials
- Certificate of Training – Hazardous Materials First Responder Awareness
- Heartsaver AED, CPR & First Aid
- HIPPA Employee Training Program
- OSHA Certification

FACILITIES SUPPORT SERVICES

Facilities Support Services introduces students to a variety of custodial, building maintenance, grounds maintenance, and warehousing distribution and inventory tasks that serve to support a facility. Students are prepared to work in a distribution center, warehouse, supply room, or a large or small facility for custodial or light maintenance support. Students will learn standard safety compliance, tool and equipment identification and operation, as well as communication tools. Students will learn these skills while supporting BCTHS for practical application of these skills. Students will also have the opportunity to support community non-profit organizations.

***Certifications available to the successful Facilities Support Systems student include*:**

- Heartsaver AED, CPR & First Aid
- OSHA Certification

FINE WOODWORKING

This competency-based program is committed to continually providing students with the skills necessary for a rewarding career in the fields of finish carpentry, fabrication and installation of commercial store fixtures, architectural millwork and kitchen cabinet design and construction. Based upon the belief that students learn best by working on projects, students will produce several projects after which they will further develop and display their skills by producing an advanced wood project of their choosing. Through the use of learning guides, lectures, demonstrations, internships, co-op and the above projects, we feel we can best prepare our students for careers in any of the four major woodworking fields: Architectural Millwork, Commercial Store Fixtures, Finish Carpentry, and Kitchen Construction and Design.

***Certifications available to the successful Cabinetmaking/Woodworking student include*:**

- Green Advantage Certification
- NCCER Certification

(National Center for Construction Education & Research)

- Heartsaver AED, CPR & First Aid
- OSHA Certification

HVAC/REFRIGERATION TECHNOLOGY

Students study basic physics and mathematics, heat transfer, pipefitting and reading of schematics, and are given extensive theoretical and practical instruction in domestic, commercial and industrial environmental control systems including protocols and safe measurement, handling and reclamation practices of refrigerants. Graduates of HVAC/Refrigeration Technology can find many employment opportunities or continue their higher education in related engineering programs.

Certifications available to the successful HVAC/Refrigeration Technology student include:

- Heartsaver AED, CPR & First Aid
- NCCER Credentials (various trades)
- OSHA Certification
- RSES Student Technician
- Student Outcome Assessment

LANDSCAPE & FLORAL DESIGN

Landscaping & Floral Design students can choose to pursue either landscaping or floral design/floral shop management. In Landscaping, classroom and laboratory work covers plant identification, care and propagation, and greenhouse cup production. Graduates may enter the business world or go on to college studies in horticulture or forestry. In Floral Design/Floral Shop Management, students learn principles of design, display and care of live, cut preserved and artificial plant materials. Instruction is given in all phases of marketing and management. Graduates can begin commercial activities or study for a college degree in business.

Certifications available to the successful Landscaping & Floral Design student include:

- Heartsaver AED, CPR & First Aid
- OSHA Certification

MACHINE TECHNOLOGY

Machine Technology students will learn practical mathematics, precision measurement and blueprint reading. Once students master the proper use and safe handling of basic machine trade hand tools, they will study set-up and operation of band saws, drill presses, lathes, milling machines and precision grinders. Work also covers heat-treating and use of optical comparators. Emphasis is placed on computer-controlled (CNC) operations. Graduates are qualified to enter apprenticeship programs or pursue studies leading to a degree in mechanical engineering.

Certifications available to the successful Machine Technology student include:

- CareerSafe/OSHA
- Heartsaver AED, CPR & First Aid
- OSHA Certification
- NIMS Machining Level I

MULTIMEDIA DIGITAL DESIGN & PROGRAMMING

Multimedia Digital Design & Programming is a career and technical program that prepares students to apply HTML, XML, JavaScript, programming, graphics applications, digital animation, and other authoring tools to the design, editing and publishing (launching) of documents, images, graphics, sound and multimedia products. This program includes instruction in programming, Internet theory, web page standards and policies, elements of web page design, user interfaces, vector tools, special effects, interactive and multimedia components, search engines, navigation, relational databases, morphing, e-commerce tools, and emerging web technologies.

Certifications available to the successful Multimedia Digital Design & Programming student include:

- Adobe Certified Associate-Visual Communication
- CareerSafe/OSHA
- Community First Aid and Safety
- Heartsaver AED, CPR & First Aid
- OSHA Certification

OUTDOOR POWER EQUIPMENT

Small gas engines are designed to provide students, do-it-yourselfers, and aspiring technicians with practical information about small gas engine theory, construction, operation, lubrication, maintenance, troubleshooting, service, rebuilding and repair. Students enrolled in Outdoor Power Equipment will find it beneficial to have a thorough understanding of engine fundamentals and service procedures.

Certifications available to the successful Outdoor Power Equipment student include:

- CareerSafe/OSHA
- Heartsaver AED, CPR & First Aid
- OSHA Certification
- Outdoor Power Equipment Technician Certification
- S/P2

PLUMBING & HEATING TECHNOLOGY

Plumbing & Heating Technology prepares students for a career as a plumber, pipe fitter, sprinkler fitter or drain cleaning mechanic. Instruction is given in principles of venting, water supply, drainage, heating, blueprint reading and plumbing codes. Hands-on work covers joining of copper, PVC, CPVC and cast iron soil pipe, installation and maintenance of dishwashers, garbage disposals, faucets and other fixtures. Graduates may enroll in apprenticeship programs or pursue a degree in chemical engineering.

Certifications available to the successful Plumbing & Heating Technology student include:

- CareerSafe/OSHA
- Heartsaver AED, CPR & First Aid
- OSHA Certification

WELDING & FABRICATION TECHNOLOGY

Students who choose Welding & Fabrication Technology will learn basic and advanced blueprint reading, fabrication, and ferrous and non-ferrous metallurgy. Laboratory instruction includes shielded metal arc welding, oxyacetylene welding MIG and TIG techniques. Theoretical and practical studies cover mild and alloy steels, aluminum, titanium and other exotic metals. Students learn the basics of heat treating, and non-destructive testing and inspection. Instruction meets AWS standards. Graduates can enter apprenticeship programs or go on to degree studies in metallurgy or mechanical engineering.

Certifications available to the successful Welding & Fabrication Technology student include:

- CPR for Family & Friends
- Heartsaver AED, CPR & First Aid
- Level I – Entry Welder
- NCCER Credentials
- OSHA Certification

RSA
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