NORRISTOWN AREA
HIGH SCHOOL

January 25, 2016

PROGRAM of STUDIES
2016 - 2017
PROGRAM OF STUDIES

January 25, 2016

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FORWARD

The NAHS Program of Studies is designed to help students and parents/guardians choose, follow, and complete a path to graduation that will prepare students for success beyond high school. This document provides general information, including the policies, procedures and requirements of the Norristown Area School District and NAHS, and includes descriptions of all of our course offerings.

Our mission is to maintain high expectations for all of our students. Together as teachers, staff members, and administrators, we strive to consistently improve our instructional practices in order to support student success. We encourage students, parents, and guardians to become familiar with the contents of the Program of Studies that will be supporting the successful educational environment at NAHS.

All courses are college preparatory because we believe that it is our responsibility to provide all students with the opportunity to go to college. There is a Weighted Honors option for many of our core courses. There are also a variety of Advanced Placement offerings in order to enable students to earn college credit while in high school.

All NAHS students and their parents/guardians, have access to a variety of support services to assist them with this course selection process. Our Guidance Office and College and Career Center services are described in detail in our student handbook, The N Book, which all students receive at the beginning of each school year.
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GENERAL INFORMATION

Subject Level Placement
In many of our required courses, students are placed at various instructional levels by the professional staff. These decisions are based on the individual needs of students, their ability, and past achievement in each subject area. We encourage students to work to their maximum potential. Parents are encouraged to contact the present subject area teacher should there be a question about their student’s subject level placement.

Program Registration and Alteration
During the registration period for the next year’s courses, each student and parent should carefully review and select subjects that will comprise the next school year’s program. Teachers and Counselors are available for advice and assistance. Once courses have been selected and submitted to the Guidance Counselor, the program becomes a contract for the next year. Every effort will be made to offer the program as selected by the student and parent; however, certain courses may be canceled due to inadequate enrollment, and others may not be available because of an irresolvable conflict in course availability. Student selections must be done carefully at the appropriate time as outlined above. Most students should have no changes after the original course selection in the spring. After school begins in the fall, schedule changes will be made only to correct an error or to accommodate scheduling.

Advanced Placement (AP) Opportunities
Advanced Placement courses are designed to expose students to college-level coursework and activities including intense discussions, collaborative problem solving, and challenging persuasive writing assignments. Students enrolling in an AP course must be committed to dedicating time outside of class to reading and writing assignments. All students enrolled in the course are required to take the AP exam in the spring. Scores of 3, 4, or 5 on these exams generally translate into college credit at most institutions of higher learning.

AP Writing Sample Requirement
In order to ensure success on AP exams, all students requesting an AP course are required to write an essay as a prerequisite. There are two purposes of this essay. First, since all AP tests have two hours of open-ended work (usually in the form of extended essays), the prerequisite essay will introduce students to the type of writing required for AP success. Second, it will allow teachers of AP courses to have a baseline indication of writing skills for each student, which will better help teachers prepare coursework and help address specific issues that may impede student success on the exam. The essays will be submitted anonymously, with student ID numbers used in place of student names. Also, the essays will be reviewed by a panel of AP teachers to ensure that the process is objective. This writing sample requirement will be in addition to all other prerequisites for the AP course such as the grade requirement (B or better in honors class) and any other details outlined in the Program of Studies. Only one essay needs to be submitted regardless of the number of AP courses the student intends to take.
GRADUATION REQUIREMENTS

Norristown Area School District and the State of Pennsylvania mandate a combination of requirements for graduation:

“Requirements shall include course completion and grades, completion of a culminating project, and results of local assessments aligned with the academic standards. The purpose of the culminating project is to assure that students are able to apply, analyze, synthesize, and evaluate information and communicate significant knowledge and understanding.”

- State Board of Education, Chapter 4

Pennsylvania Department of Education - Keystone Exams

Starting with the Class of 2017, students will be required to demonstrate proficiency on the Algebra I, Literature and Biology Keystone Exams to graduate from high school.

Course Requirements –

<table>
<thead>
<tr>
<th>Discipline Area</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (I, II, III, IV)</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics (Algebra I, Algebra II, Geometry, Mathematics Elective)</td>
<td>3</td>
</tr>
<tr>
<td>Social Studies (World Cultures, United States History I and II, United States Government)</td>
<td>3</td>
</tr>
<tr>
<td>Science (Biology, Chemistry, Science Elective)</td>
<td>3</td>
</tr>
<tr>
<td>Wellness/Physical Education</td>
<td>2</td>
</tr>
<tr>
<td>Electives</td>
<td>10</td>
</tr>
</tbody>
</table>

Remediation

Students who do not demonstrate proficiency in any required course by passing the course, or fail to earn the prescribed number of credits for grade promotion or graduation will be required to recover the missing credits.

Promotion Requirements –

<table>
<thead>
<tr>
<th>Minimum Credits required</th>
<th>to enter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.5</td>
<td>10</td>
</tr>
<tr>
<td>11.0</td>
<td>11</td>
</tr>
<tr>
<td>18.0</td>
<td>12</td>
</tr>
<tr>
<td>25.0</td>
<td>to graduate</td>
</tr>
</tbody>
</table>

Transfer Credits

Because of the variety of high school schedule models currently in existence (e.g., traditional, 4X4, A/B), transfer credits present a unique challenge. During the registration/scheduling process, counselors will review an incoming student’s transfer credits and provide a detailed path to graduation. Every effort will be made to align transfer credits with the NAHS Program of Studies. However, in order to receive an NAHS diploma, students must meet the NAHS requirements as outlined in this document, particularly with regard to the requirements for English, Math, Science, Social Studies, and Physical Education.

Students who transfer to our school at the end of a complete school year are most easily accommodated. Students who transfer during the school year without a significant interval between the time they left their previous school and the time they enroll here are generally able to attain a path to graduation with their class. However, students, parents, and guardians should be aware that a transfer occurring after a significant interval between the time students left their previous school and the time they enroll here are subject to receiving partial credit that will require some form of remediation in order to graduate with their class.
College-Bound Athletes
Students should be aware that the National Collegiate Athletic Association (NCAA) maintains strict criteria for the college admission of athletes. Please consult with your Counselor and Athletic Coach concerning these requirements and how they affect your acceptance to the college of your choice.

Course Prerequisites
Many courses, especially Advanced Placement or Weighted Honors courses, have prerequisites listed in the Program of Studies. If students do not demonstrate success with at least a “C” in any Advanced Placement or Weighted Honors course that has been taken against the advice of the teacher or guidance counselor, there will be a one-year moratorium on taking another AP or WH course in that subject area. The purpose of this policy is to ensure that students have appropriate grades and demonstrated success on their transcripts in order to successfully apply and be accepted to colleges of their choice. Once a student has opted into an Advanced Placement or Weighted Honors course, a change to a different course will not be made during the school year.

Course Requests
If there are not a minimum of 15 requests for a course, there is a strong probability that the course will not be offered.

Withdrawing from a Class After the School Year Starts
With mutual agreement between the student, parent, counselor, and administrator, a course may be dropped from a student’s schedule once the school year begins. Any such drop that occurs after October 1 will result in a withdraw grade being permanently recorded on the students transcript. It a student’s grade in the class from which they are withdrawing is failing at the time of the withdrawal, the student will receive a WF (Withdrawn/Fail) from the course. In calculating the grade point average, withdrawal failing will be considered an attempted credit and withdrawal passing will not be considered as an attempted credit.

GRADE CALCULATION

Grade Point Average (GPA) and Class Rank
Grade point average is calculated at the end of each school year. It is computed by assigning points to the final grade of each course taken, adding the points for all courses taken (quality points), and then dividing that total number of quality points by the total number of attempted credits.

A = 4 points
B = 3 points
C = 2 points
D = 1 point
F = 0 points

Grade Point Average is used to determine class rank within each grade. Class rank is used as an academic descriptor for college admissions and employers. Class rank, grades, and other achievement factors are used by the faculty to select academic honors and awards at graduation.

Weighted Grades
Students receive a weighted grade point average for successfully completing courses identified as most difficult. Courses listed as Honors and Advanced Placement will receive an additional weighting.

Final Grades for courses in these categories are computed as follows:

A = 5 points
B = 4 points
C = 3 points
D = 2 points
F = 0 points
Beginning with the Class of 2019, the GPA will be calculated using a multiplier. For each weighted honors course, a multiplier of .005 will be used and for each AP course, a multiplier of .0075 will be used.

1. Calculate students Non Weighted GPA. GPA = Quality Points / Total Credits.
   - Quality Points are calculated as follows (Grade Value * Course Credit)
     A = 4 pts.
     B = 3 pts.
     C = 2 pts.
     D = 1 pts.
     F = 0 pts.

2. Weighted GPA Factor Calculation
   - Step A - Multiply the number of WH courses by .005
   - Step B - Multiply the number of AP courses by .0075

3. Weighted Factor Calculation = 1 + ((# of Weighted courses * .005) + (# of AP courses * .0075))

4. Calculate GPA by multiplying GPA by Weighted GPA Factor

Example of a Transcript:

<table>
<thead>
<tr>
<th>10th Grade</th>
<th>Credits</th>
<th>Letter Grade Earned</th>
<th>Points Earned</th>
<th>WH</th>
<th>AP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wellness II</td>
<td>.5</td>
<td>A</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WH English II</td>
<td>1</td>
<td>A</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>WH U.S. I</td>
<td>1</td>
<td>A</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Algebra II</td>
<td>1</td>
<td>C</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biology</td>
<td>1</td>
<td>B</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Art Major II</td>
<td>1</td>
<td>B</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AP Psychology</td>
<td>1</td>
<td>A</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Spanish II</td>
<td>1</td>
<td>A</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>7.5</strong></td>
<td></td>
<td><strong>28</strong></td>
<td><strong>2</strong></td>
<td><strong>1</strong></td>
</tr>
</tbody>
</table>

| GPA             | 28/7.5  | =                   | 3.73          |
| (WH multiply by .005) | 2*.005  | =                   | 0.01          |
| (AP multiply by .0075) | 1*.0075  | =                   | .0075         |
| **Weighted GPA Factor** | 1+(0.01+0.0075) | =                   | 1.0175        |
| **10th Grade New GPA** | 3.73*1.0175 | =                   | **3.80**      |

Valedictory and Salutatory Honors
Valedictory and Salutatory Honors designations are based on the highest and second highest GPA respectively. Students with identical GPAs will be further ranked in descending order according to the number of credits earned.
The NAME of this course is English II – Weighted Honors.

The COURSE NUMBER for Weighted Honors English II is 0020. This number is used for data processing and computer scheduling.

WEIGHTED HONORS means that the workload and level are challenging, resulting in the application of a weight to the credits earned.

Only students in GRADE 10 may enroll in this class.

0020 English II – Weighted Honors

Prerequisite: C or better in English I (001 or equivalent)
Honors English II is a rigorous academic program that focuses on higher level thinking skills as well as the state standards. The course's workload and level of material presented are challenging. The 10th grade honors class includes a study of literary genre and literary devices through a variety of works from American and European culture. The course focuses on writing and presentation as well as critical literary analysis. Students who take this course will write numerous full-length essays and engage in multiple revisions/drafts. Assignments throughout the course are designed to prepare students for the SAT, AP courses, and college research skills. The research unit will prepare students for college expectations in this area.

Honors English II has a PREREQUISITE of a final grade of C or better in English I (or equivalent), meaning students must already have taken English 001 or Weighted Honors English 0010 prior to enrolling in this class. They must also have a final grade of at least a C as of the end of the school year.

On successful completion of this course, the student will earn 1 CREDIT toward graduation and satisfy the second year of the four year English requirement.
The following courses are graduation requirements in the areas of English, Math, Science, Social Studies, and Health/Physical Education:
Sample English Course Pathways
2016-2017

Freshman
Academic

Sophomore

Junior
*English III WH
English III

Senior
*English IV WH
English IV

College Prep

Distinguished
Honors

*See Prerequisites
ENGLISH

All English courses are rigorous academic programs that focus on higher level thinking skills and are aligned to PA Core standards.

001  English I  Required  9  1 Credit
English I will consist of an introduction to literature (short stories, Romeo and Juliet and poetry, with emphasis on basic literary terminology) and expository writing (organization, unity, development of good paragraph and composition structure, and grammar remediation as needed). In addition, each student is required to read four novels and complete a research project. The 9th Grade English course uses the Holt McDougal textbook which is aligned to the PA Core standards for English and Language Arts. As such, students in 9th grade English will be reading literature through a lens that explores author’s purpose, text analysis and character development in addition to the other PA Core standards.

0010  English I – WH  9  1 Credit
The course's workload and level of material is more challenging and includes additional material and advanced activities presented at an increased pace. The 9th grade Honors class focuses on literary genre and type. The 9th Grade Weighted Honors English course uses the Holt McDougal textbook which is aligned to the PA Core standards for English and Language Arts. As such, students in 9th grade WH English will be reading literature through a lens that explores author’s purpose, text analysis and character development in addition to the other PA Core standards. In an honors class, the level of in-class discussion and outside work will be more complex and students will be expected to do a great deal of outside reading, writing, independent work, and text analysis.

002  English II  Required  10  1 Credit
Prerequisite: Successful Completion of English I
English II expands on basic composition structure and introduces practical writing formats. These structures are applied to the study of literary genre. A vocabulary unit, which includes word lists and a variety of dictionary and verbal skills, prepares students for tests including the PSAT. Grammar study and remediation follow writing and assignments. A short research paper and several speaking activities are included. The 10th Grade English course uses the Holt McDougal textbook which is aligned to the PA Core standards for English and Language Arts. As such, students in 10th grade English will be challenged to read complex literature and explore such ideas as author’s voice, point of view, and text structure in addition to the other PA Core standards. Upon successful completion of this course, students will take the Keystone Exam.

0020  English II – WH  10  1 Credit
Prerequisite: Successful Completion of English I with an “A” and Teacher Recommendation or Successful Completion of English I WH with a “B” or Better.
Honors English II is a rigorous academic program that focuses on higher level thinking skills as well as the state standards. The course’s workload and level of material presented are challenging. The 10th grade honors class includes a study of literary genres and literary devices through a variety of works from American and European authors. The course focuses on writing and presentations as well as critical literary analysis. Students who take this course will write numerous full-length essays and engage in multiple revisions/drafts. Assignments throughout the course are designed to prepare students for the SAT, AP courses and college research skills. The research unit will prepare students for college expectations in this area. There will be summer reading and assignments for this class. In an honors class, the level of in-class discussion and outside work will be more complex and students will be expected to do a great deal of outside reading, writing, independent work, and text analysis. Upon successful completion of this course, students will take the Keystone Exam.

0021  English II Keystone Enrichment (semester class)  .5 Credit
Prerequisite: Any Student in the Class of 2017 and beyond not Scoring Proficient on the Keystone Test
This course is designed to support and revisit topics in Literature to promote academic success in their current English course and to prepare the student for the Keystone Literature exam that is a state requirement for graduation. Students will be assigned to this course based on Keystone Exam performance.
English II Project Based Assessment (semester class)  0 Credit

Prerequisite: Any Student in the Class of 2017 and beyond who has Completed Algebra I Keystone Enrichment and has not Scored Proficient on the Keystone Exam

The Pennsylvania Department of Education (PDE) has developed a project based assessment system that is aligned with the modules for each Keystone Exam or Keystone Exam Module. Successful completion of a project-based assessment (PBA) aligned to the Keystone Exam or Keystone Exam Module on which a student did not demonstrate proficiency shall satisfy the Chapter 4 Keystone Exam graduation requirements. Students will be assigned to this courses based on Keystone Exam performance.

English III  11  1 Credit

Prerequisite: Successful Completion of English II

English III is an integrated course based on American Literature. Components will include the reading and interpretation of literature (novel, short story, essay, poetry, and drama), literary terminology, vocabulary enrichment, speaking activities, research project, and writing that reflects literary readings. 11th Grade English course uses the Holt McDougal textbook which is aligned to the PA Core standards for English and Language Arts. As such, students in 11th grade English will be reading literature through a lens that addresses all of the PA Core standards.

English III – WH  11  1 Credit

Prerequisite: Successful Completion of English I with an “A” and Teacher Recommendation or Successful Completion of English I WH with a “B” or Better

Honors English II is a rigorous academic program that focuses on higher level thinking skills as well as the PA Core standards. The course’s workload and level of material presented are challenging. The 10th grade honors class includes a study of literary genres and literary devices through a variety of works from American and European authors. The course focuses on writing and presentations as well as critical literary analysis. Students who take this course will write numerous full-length essays and engage in multiple revisions/drafts. Assignments throughout the course are designed to prepare students for the SAT, AP courses and college research skills. The research unit will prepare students for college expectations in this area. There will be summer reading and assignments for this class. In an honors class, the level of in-class discussion and outside work will be more complex and students will be expected to do a great deal of outside reading, writing, independent work, and text analysis.

AP Language and Composition  11  1 Credit

Prerequisite: Successful Completion of English II WH with a “B” or Better & Teacher Recommendation

The AP English Language and Composition course is designed to help students become skilled readers of prose written in a variety of rhetorical contexts and to become skilled writers who compose for a variety of purposes. This college-level course provides students with opportunities to write about a variety of subjects and to demonstrate an awareness of audience and purpose. The course will also enable students to read complex texts with understanding and to write prose of sufficient richness and complexity to communicate effectively with mature readers. At the end of the course, all students are required to take the Advanced Placement examination in Language and Composition. There will be summer reading and assignments for this class.

English IV  12  1 Credit

Prerequisite: Successful Completion of English III (003)

English IV is an integrated course based on a chronological survey of British literature with enrichment from literary works in World Literature. Components will include advanced literary terminology, vocabulary development through context, speaking activities, expository writing based on literary study, and a research unit. The 12th Grade English course uses the Holt McDougal British and World Literature textbook which is aligned to the PA Core standards for English and Language Arts. The course, while focused on British Literature and World Literature, also includes a robust focus on writing and vocabulary development with a special emphasis on preparing students for post-secondary education.

English IV – WH  12  1 Credit

Prerequisite: Successful Completion of English III with an “A” or Successful Completion of English III WH with a “B” or Better. If a “C” is earned in English III WH, then a Teacher Recommendation is needed

English IV Weighted Honors is a demanding, honors level British Literature course. The 12th grade honors class focuses on British and world literature and includes novel study, drama, poetry, and short stories. In the weighted honors course, students will analyze multiple interpretations of a story, drama, or poem (e.g., recorded or live production of a play or recorded novel or poetry), and evaluate how each version interprets the source text. This course increases and enhances writing skill through regular writing, revision, and rewriting. There will be summer reading and assignments for this class. The 12th Grade English WH Course uses the Holt McDougal British and World Literature textbook which is aligned to the PA Core standards for English and Language Arts.
The AP English Literature and Composition course is a college-level course that engages students in the careful reading and critical analysis of imaginative literature. Through the close reading of selected texts, students can deepen their understanding of the ways writers use language to provide both meaning and pleasure for their readers. As they read, students should 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 course includes intensive study of representative works from various genres and periods, concentrating on works of recognized literary merit. The works chosen invite and gratify rereading. At the end of the course, all students are required to take the Advanced Placement examination in Literature and Composition. There will be summer reading and assignments for this class.
Sample Mathematics Course Pathways
2016-2017

**Freshman Academic**
- Algebra I
- Algebra I-Links A
- Algebra I-Links B
  *WH Algebra I

**Sophomore**
- *WH Algebra II
- Algebra II

**Junior**
- *WH Geometry
- Geometry

**Senior**
- *WH Pre-Calculus
- *Pre-Calculus
- *Algebra 3
- *Statistics
- Business Math

**College Prep**
- *WH Algebra II
- Algebra II

- *WH Geometry
- Geometry

- *WH Pre-Calculus
- *Pre-Calculus
- *Algebra 3
- *Statistics
- *AP Statistics

**Distinguished Honors**
- *WH Geometry

- *WH Pre-Calculus
- *Pre-Calculus
- *Algebra 3
- *Statistics
- *AP Statistics

- *WH Calculus
- *AP Calculus AB
- *AP Statistics

- *WH Calculus
- *AP Calculus BC
- *AP Statistics

*See Prerequisites
MATHEMATICS

All Mathematics courses are rigorous academic programs that focus on higher level thinking skills and are aligned to PA Core standards.

Calculator Recommendation: It is recommended that every student have a graphing calculator (Texas Instrument TI-83+ or TI-84+) for use at home. Calculators are provided for student use during each math class. In addition, calculators will be available for sign out ONLY for courses required.

206 Pre-Algebra 1 Credit
This course is designed for our ESL students that may require extra foundational skills before entering Algebra I. In this course, students will review mathematical skills needed for the study of algebra as well as a brief introduction to algebra. Topics include the arithmetic of integers, fractions, decimals, and percents; applications of these arithmetic skills to problems involving measurement, percent, ratio, and proportion; and math study skills. The introduction to algebra consists of operations on signed numbers, algebraic expressions, solving linear equations and an introduction to graphing.

208 Algebra I-Links A (semester class) .5 Credit
Algebraic topics will be introduced in this course. The goal of this course will be to provide students with an opportunity to enhance algebraic concepts through the integration of graphical, numerical, analytical and verbal processes while building the groundwork for future success in the study of mathematics. This course will focus on interpretation of solutions in the context of the problem and will emphasize real world applications, recognizing patterns, and data analysis. Students will take the Keystone Exam upon completion of Algebra I-Links B.

2081 Algebra I-Links B (semester class) .5 Credit
Prerequisite: Successful Completion of Algebra I-Links A
This course will extend the algebraic topics introduced in Algebra IA. The goal of this course will be to provide students with a deeper understanding of algebraic concepts through the integration of graphical, numerical, analytical, and verbal processes while continuing to build the groundwork for future success in the study of mathematics. This course will continue to emphasize interpretation of solutions in real world applications, recognizing patterns, and data analysis. Upon completion of this course, students will take the Keystone Exam.

209 Algebra I Required 1 Credit
Prerequisite: Successful Completion of Principles of Algebra with a “C” or Better and Proficient on 8th grade PSSA
This course includes the study of the basic language and concepts of algebra. In alignment with the PA Core standards, it focuses on topics related to statistics, data analysis, probability, predictions, functions, and graphing. Students will formulate and solve equations and inequalities to model routine, real life scenario problems. In addition, they will learn how to graph a linear function, identify its equation, and work with systems of equations. They will do matrix problems and apply them to real life situations. Upon successful completion of this course, students will take the Keystone Exam.

2090 Algebra I – WH 1 Credit
Prerequisite: Keystone Exam Score Must be Greater than 1450 or Successful Completion of Principles of Algebra in 8th Grade with a “B” or Better & 8th Grade Teacher Recommendation
In alignment with the PA Core standards this course involves an intensive study of equations and inequalities, graphing, and systems of equations. In addition students will solve quadratic equations, perform operations with radical and rational expressions, and solve radical and rational equations. Upon completion, students will take the Keystone Exam.

210 Algebra I Keystone Enrichment (semester class) .5 Credit
Prerequisite: Any Student in the Class of 2017 and beyond not Scoring Proficient on the Keystone Test
This course is designed to support and revisit topics in Algebra I to promote academic success in their current Math course and to prepare the student for the Keystone Algebra I exam that is now a state requirement for graduation. Students will be assigned to this courses based on Keystone Exam performance.
211/212  **Algebra I Project Based Assessment (semester class)**  
0 Credit  
Prerequisite: Any Student in the Class of 2017 and beyond who has Completed Algebra 1 Keystone Enrichment and has not Scored Proficient on the Keystone Exam  
The Pennsylvania Department of Education (PDE) has developed a project based assessment system that is aligned with the modules for each Keystone Exam or Keystone Exam Module. Successful completion of a project-based assessment (PBA) aligned to the Keystone Exam or Keystone Exam Module on which a student did not demonstrate proficiency shall satisfy the Chapter 4 Keystone Exam graduation requirements. **Students will be assigned to this course based on Keystone Exam performance.**

215  **Algebra II**  
Required  
1 Credit  
Prerequisite: Successful Completion of Algebra I  
Algebra II includes extension of those concepts learned in Algebra I and incorporates the study of exponential equations, systems of equations, logarithms, functions, sequences and series, and matrix problems. In alignment with the PA Core standards, students will also learn how to solve linear and quadratic equations both symbolically and graphically.

2150  **Algebra II – WH**  
1 Credit  
Prerequisite: Successful Completion of Algebra I with a “B” or Better and Proficient on Keystone Exams  
In alignment with the PA Core standards this course involves an intensive study of exponential equations, logarithms, patterns, sequences and series, standard deviation, and trigonometric functions. Students will solve systems of inequalities, linear and exponential equations, and equations of degree greater than two.

220  **Geometry**  
Required  
1 Credit  
Prerequisite: Successful Completion of Algebra I  
This course includes a study of measurement, estimation and algebraic and trigonometric functions. In alignment with the PA Core standards, students will measure and compare angles and make predictions. Students will analyze figures in terms of area, perimeter, volume, symmetry, congruency, and similarity. In addition, they will prove triangles similar or congruent, identify corresponding parts of congruent triangles and use the properties of angles, arcs, chords, tangents, and secants to solve problems involving circles.

2200  **Geometry - WH**  
1 Credit  
Prerequisite: Successful Completion of Algebra II WH with a “B” or Better or Successful Completion of Algebra II with an “A” & Teacher Recommendation and proficient on the Keystone Exams  
This course is an intensive study of the basic properties and relationships of geometric figures. Students will analyze figures in terms of area, perimeter, volume, symmetry, congruency, and similarity. In alignment with the PA Core standards, this course will also include topics of trigonometry. Students will also construct geometric figures and will perform various types of proofs.

235  **Algebra III**  
1 Credit  
Prerequisites: Successful Completion of Algebra I, Algebra II & Geometry  
This course is designed to prepare students for college-level mathematics courses. This course provides a thorough examination of topics necessary for College Algebra or Pre-Calculus, and puts more emphasis on Algebra with advanced topics. Students in this course will also study set theory, counting and probability theories, nonlinear system of equations, matrices and the standard concepts of trigonometry.

225  **Pre-Calculus**  
1 Credit  
Prerequisites: Successful Completion of Algebra II, Geometry & Teacher Recommendation  
This course is recommended for those students who plan to continue the study of mathematics beyond high school. This course includes the study of the algebra of polynomial, absolute value, exponential, logarithmic, trigonometric, and other functions. It also includes the study of triangle trigonometry and the unit circle. **A graphing calculator is required for home use.**

2240  **Pre-Calculus – WH**  
1 Credit  
Prerequisites: Successful Completion of Geometry WH with a Final Grade of a “B” or Better and Successful Completion of Algebra II WH with a Final Grade of an “A” & Teacher Recommendation  
This course is offered as a preparation for the Advanced Placement Calculus (AB) class or Calculus I in college. Students study polynomial and rational functions, logarithmic and exponential functions, and trigonometric functions as well as limits and derivatives. Students work in groups to solve real world problems. **A graphing calculator is required for home use.**
Calculus – WH  
Prerequisite: Successful Completion of Pre-Calculus WH with a Final Grade of a “B” or Better & Teacher Recommendation

This class provides students with the opportunity to study and experiment with calculus and analysis. Students work in a hands-on manner to discover some of the basic ideas used in calculus today. Students begin the process of studying calculus to better prepare them for the college courses they will take in the future. Although this is not an AP class, it prepares students to transition into the college level class of their choice. The students complete projects and experiment with real data. A graphing calculator is required for home use.

AP Calculus AB (WH)  
Prerequisite: Successful Completion of Pre-Calculus WH with a Final Grade of a “B” or Better and Teacher Recommendation

The AB Calculus class is designed to cover what students study during a college calculus class. The curriculum has been designed by the College Board through consultation with teachers and college professors from across the nation. Students review functions and students examine limits, derivatives and their applications, and integrals and their applications. Students are required to take the Calculus AB Advanced Placement examination. A graphing calculator is required for home use.

AP Calculus BC (WH)  
Prerequisite: Successful Completion of Calculus WH or AP Calculus AB with a Final Grade of a “B” or Better and Teacher Recommendation

Calculus BC is a course in single-variable calculus that includes all the topics of Calculus AB (techniques and applications of the derivative, techniques and applications of the definite integral, and the Fundamental Theorem of Calculus) plus additional topics in differential and integral calculus (including parametric, polar, and vector functions) and series. It is equivalent to at least a year of calculus at most colleges and universities. Algebraic, numerical, and graphical representations are emphasized throughout the course. Students enrolled in this course are required to take the Calculus BC Advancement Placement examination. A graphing calculator is required for home use.

Statistics  
Prerequisite: Successful Completion of Algebra II & Geometry

This course provides students with the opportunity to study and experiment with statistics and data analysis. Students look at the way statistics are used in the work world and how statistics can be manipulated in order to mislead. Students develop awareness of these misuses in order to make them better consumers. Students work in a hands-on manner to discover some of the basic ideas used in statistics today. Students complete statistical research projects and experiment with real data. A graphing calculator is required for home use.

AP Statistics (WH)  
Prerequisite: Successful Completion of Algebra II WH with a Final Grade of an “A” or Successful Completion of Algebra II WH with a Final Grade of a “B” or Better and Teacher Recommendation

AP Statistics provides students with the opportunity to explore data and determine how the results from those data can be applied. The course is designed for college-bound students, whether they plan to major in a mathematics field or not. The four themes studied in AP Statistics are exploring data, planning a study, anticipating patterns, and statistical inference. Students are required to take the AP Statistics examination. A graphing calculator is required for home use.
Sample Science Course Pathways
2016-2017

Freshman

Academic

*WH Biology I

Biology I

Sophomore

*WH Chemistry

Chemistry

*WH Physics

Physics

Science Elective

*AP Chemistry

*AP Biology

*AP Environmental

Science Elective

College Prep

*WH Biology I

Biology I

*WH Chemistry

Chemistry

*WH Physics

*AP Chemistry

*AP Biology

*AP Environmental

Distinguished Honors

*WH Biology I

*AP Environmental

*WH Chemistry

*WH Physics

*AP Biology

*AP Chemistry

*AP Environmental

Science Elective

*AP Physics

*AP Chemistry

*AP Biology

Science Elective

*See Prerequisites
SCIENCE

All Science courses are rigorous academic programs that focus on higher level thinking skills and are aligned to PA Core standards.

301  **Biology I**  
Required  
9  1 Credit
This introductory course in life science begins with a detailed study of the characteristics of living things and the environment in which they live and progresses to a study of the cell, DNA, genetics, and Linnaean Classification. Appropriate laboratory work is included. The Biology course uses the *Prentice Hall Biology* textbook which includes the PA Core standards in biology as they are currently written. Major topics addressed in the course include comparing and contrasting cellular processes (i.e. photosynthesis) and conducting laboratory experiments to test and validate scientific theories. Upon successful completion of this course, students will take the Keystone Exam.

3010  **Biology I – WH**
Prerequisite: 8th Grade Science Teacher Recommendation  
9  1 Credit
This course presents a rigorous and comprehensive examination of the fundamental biological themes including investigative inquiry, ecology and classification, levels of biological organization, cell biology, biochemistry, energy metabolism and nutrition, homeostasis, cell transport, genetics, and biotechnology. All laboratory exercises support these themes and demand proper written communication of scientific method, techniques, manipulation of data, analysis of scientific data, and the use of experimental data and critical thinking to support conclusions. Students need to be interested in science to take this course. Upon successful completion of this course, students will take the Keystone Exam.

3011  **Biology I Keystone Enrichment (semester class)**
Prerequisite: Any Student in the Class of 2017 and Beyond not Scoring Proficient on the Keystone Test  
.5 Credit
This course is designed to support and revisit topics in Biology I to promote academic success in their current and to prepare the student for the Keystone Biology I exam that is now a state requirement for graduation. **Students will be assigned to this courses based on Keystone Exam performance.**

3012  **Biology I Keystone Project Based Assessment (semester course)**
0 Credit
The Pennsylvania Department of Education (PDE) has developed a project based assessment system that is aligned with the modules for each Keystone Exam or Keystone Exam Module. Successful completion of a project-based assessment (PBA) aligned to the Keystone Exam or Keystone Exam Module on which a student did not demonstrate proficiency shall satisfy the Chapter 4 Keystone Exam graduation requirements. **Students will be assigned to this courses based on Keystone Exam performance.**

306  **Chemistry**  
Required  
10  1 Credit
Prerequisites: Biology I or Biology I WH & Algebra II (may be taken concurrently)  
This chemistry course is an introduction to chemical principles. A comprehensive examination of the fundamental chemical themes including stoichiometry, properties of gases, liquids, solids and solutions, nomenclature, and scientific measurement are presented. All laboratory exercises support these themes and demand proper written communication of scientific method, techniques, manipulation of data, analysis of scientific data, and the use of experimental data and critical thinking to support conclusions.

3060  **Chemistry - WH**  
10  1 Credit
Prerequisites: Successful Completion of Biology I with an “A” or Biology I WH with a “B” or Better, and Successful Completion of Algebra I & II with a “B” or Better  
This chemistry course is designed to prepare students for college-level general chemistry. A rigorous and comprehensive examination of the fundamental chemical themes is presented including the periodic table, atomic theory, chemical bonding, stoichiometry, properties of gases, liquids, solids and solutions, chemical equilibrium, nomenclature, acids and bases, and pH. All laboratory exercises support these themes and demand proper written communication of scientific method, techniques, manipulation of data, analysis of scientific data, and the use of experimental data and critical thinking to support conclusions.
308  Earth-Space Science  12  1 Credit
Prerequisites: Successful Completion of Biology I or Biology I WH & Chemistry
Earth-Space is a blend of several sciences including Biology, Chemistry and Physics. In this course, students will explore the earth as a system of components that function together. Students will explore the structure, the processes that affect the surface, and the actions of the atmosphere. In this exploration of earth, students will cover several environmental and conservation issues. This course will also view the earth as a member of the solar system and the universe.

3080  Earth-Space Science - WH  12  1 Credit
Prerequisites: Successful Completion of Biology I & Chemistry with an “A” or Biology I WH & Chemistry WH with a “B” or Better
This course requires students to employ previously and newly learned scientific and problem-solving skills along with appropriate technology to a study of the Earth, The Earth’s movement in space, and how event on Earth affect human activity. The scope of this course ranges from an in-depth examination of the movement of the Earth’s plates to how man has adapted to changes in his environment caused by himself and natural events. Students will receive 4-6 hours of independent material to work on outside of the class per week.

311  Physics  12  1 Credit
Prerequisites: Successful Completion of Biology I or Biology I WH, Chemistry, Geometry & Algebra II
This course presents an examination of the fundamental themes of Newtonian mechanics, light, sound, electricity, magnetism, and modern physics. The study of physics is helpful for students who will most likely go into college or some form of post-high school education.

3110  Physics - WH  12  1 Credit
Prerequisites: Successful Completion of Biology I, Chemistry and Successful Completion of Pre-Calculus WH or Pre-Calculus (may be taken concurrently)
This course presents a rigorous and comprehensive examination of the fundamental themes of Newtonian mechanics, light, sound, electricity, magnetism, and modern physics. All laboratory exercises support these themes and demand proper written communication of scientific method, techniques, manipulation of data, analysis of scientific data, and the use of experimental data and critical thinking to support conclusions. Students need to be highly motivated in science. The study of physics is helpful for students who will most likely go into college or some form of post-high school education. The concepts and laws of physics explored during this course will be defined mathematically. The relationship between physics and calculus will also be explored. During each marking period students will be required to complete an independent or small group project related to topics in physics.

314  Environmental Science  12  1 Credit
Prerequisites: Successful Completion of Biology I & Chemistry
Environmental science includes the study of biological ecosystems (all living things within a particular geographic location). The course will also examine the impact of man and nature on the survival of the existing environment. Incorporated will be field evaluations of local rivers and streams, with the possibility of community service through water and soil testing of parks and watersheds. Present concern for our environment is a major political and social issue, and government regulation is a key concern as well. Career opportunities in environmental service should expand to meet these needs.

3140  AP Environmental Science (WH)  10, 11, 12  1 Credit
Prerequisites: Successful Completion of Biology I WH with a “B” or Better and Teacher Recommendation or Successful Completion of Biology I with an “A” and Teacher Recommendation
This course will cover the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze both natural and human-made environmental problems, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. Students who take this course are required to take the AP Environmental Science exam. In addition, summer assignments must be completed prior to entering the course.
3030 AP Biology (WH) 11, 12 1 Credit
Prerequisites: Successful Completion of Biology I WH with a “B” or Better and Teacher Recommendation or Successful completion of Biology I with an “A” and Teacher Recommendation
This course is organized based on the four big ideas and corresponding enduring understandings as listed in the Curriculum Framework. The four big ideas are: Big Idea 1: The process of evolution drives the diversity and unity of life. Big Idea 2: Biological systems utilize free energy and molecular building blocks to grow, reproduce and to maintain dynamic homeostasis. Big Idea 3: Living systems store, receive, transmit and respond to information essential to life processes. Big Idea 4: Biological systems interact, and these systems and their interactions possess complex properties. All of the big ideas & essential knowledge components will be taught to students and all learning objectives will be assessed using laboratory, exam and formative assessments. While this course generally flows from Big Idea 1 to 2 to 3 to 4, each unit will provide students with opportunities to make connections between all four big ideas, as evidenced in the “Course Details” section. In addition, summer assignments must be completed prior to entering the course.

30600 AP Chemistry (WH) 11, 12 1 Credit
Prerequisites: Successful Completion of Chemistry WH with a “B” or Better and Teacher Recommendation or Successful Completion of Chemistry with an “A” and Teacher Recommendation
This AP Chemistry course is college level course. For most students, the course enables them to undertake, as a freshman, second year work in the chemistry sequence at their institution or to register in courses in other fields where general chemistry is a prerequisite. This course is structured around the six big ideas articulated in the AP Chemistry curriculum framework provided by the College Board. This framework is based on six big ideas. Big Idea 1: Structure of matter, Big Idea 2: Properties of matter-characteristics, states, and forces of attraction, Big Idea 3: Chemical reactions, Big Idea 4: Rates of chemical reactions, Big Idea 5: Thermodynamics. Big Idea 6: Equilibrium A special emphasis will be placed on the practices, which capture important aspects of the work that scientists engage in, with learning objectives that combine content with inquiry and reasoning skills. AP Chemistry is open to all students that have completed a year of chemistry who wish to take part in a rigorous and academically challenging course (see prerequisites). In addition, summer assignments must be completed prior to entering the course.

3111 AP Physics (WH) 12 1 Credit
Prerequisites: Successful Completion of WH Physics with a “C” or Better or Physics with a “B” or Better
AP Physics is an algebra-based, introductory college-level physics course. Students cultivate their understanding of Physics through inquiry-based investigations as they explore topics such as fluid statics and dynamics; thermodynamics with kinetic theory; PV diagrams and probability; electrostatics; electrical circuits with capacitors; magnetic fields; electromagnetism; physical and geometric optics; and quantum, atomic, and nuclear physics.
**Sample Social Studies Course Pathways**
**2016-2017**

**Freshman**
- Academic
  - World Cultures
  - *WH U.S. History I
  - U.S. History I

**Sophomore**
- *WH U.S. History II
  - U.S. History II

**Junior**
- American Systems WH
  - and
  - Elective

**Senior**
- *AP Government
  - *American Systems WH
  - and
  - Elective

**College Prep**
- *WH World Cultures
  - *WH U.S. History I
  - U.S. History I

**Distinguished Honors**
- *AP U.S. History
  - *WH World Cultures
  - *WH U.S. History I
  - and
  - Elective

**Electives**
- *AP Modern European History
- *AP Psychology
- Civics
- European History
- Law
- Psychology
- Sociology
- World Geography & Political

*See Prerequisites*
SOCIAL STUDIES

All Social Studies courses are rigorous academic programs that focus on higher level thinking skills and are aligned to PA Core standards.

102  **World Cultures & Literature**  **Required**  9  1 Credit
This survey course examines interactions around the world from both past and present perspectives. Students explore the history of Europe, Africa, Asia and North/South America and the interconnection these regions have in modern day. Students will investigate geography, history, belief systems, political systems, culture and contemporary issues of the different regions in the world through the examination of primary and secondary sources and research skills. Students will read a series of short stories which encapsulate the culture of people worldwide and analyze their global impact. Students will precisely and effectively communicate what has been learned, and then be able to apply learning to new situations. Literacy strategies and skills will be embedded into the World Cultures and Literature course on a daily basis to bolster students’ critical reading, writing and thinking skills.

1020  **World Cultures & Literature – WH**  **Required**  9  1 Credit
Prerequisites: Successful completion of 8th Grade Social Studies with a grade of a “B” or Better
Weighted Honors World Cultures will provide students with the opportunity to develop analytical skills of the various cultures of the world. The course progresses from the emergence of Islam in 600 AD to the Industrial Age. This is a survey course that examines the roots and development of Europe, the Middle East, Africa, the Americas and Asia throughout modern day history. Throughout this course, students will be challenged academically through rigorous and relevant examination of historical events throughout various time periods and their link to contemporary issues. Students will be able to evaluate the interaction and cultural influences throughout the world between cultures. Students will use technology, primary and secondary sources, research skills, simulations, media resources and traditional text to expand their understanding of history. Students will be expected to create meaningful and thoughtful assignments and develop critical thinking skills.

100  **U.S. History I**  **Required**  10  1 Credit
U.S. History I is a rigorously paced course, with a goal of developing independent learners and readers. This course is skill-driven, with an emphasis on content. The course will have an emphasis on development and maintenance of reading, writing, and comprehension skills. Key academic skills such as note-taking, text summary and review, organization, synthesis, research, and analysis will be taught and assessed. Content is delivered and reviewed in manageable units. Students should expect regular homework and weekly assignments directed toward content review and skill practice. All work is designed around the goal of eventual independence at post-secondary school institutions. With this course, the student will be able to understand the problems of a young and developing nation. Presented are the political, social, and cultural accomplishments of the United States from the 1850’s to World War I.

1000  **U.S. History I – WH**  **Required**  10  1 Credit
Prerequisites: Successful Completion of World Cultures with a “B” or Better & Teacher Recommendation
This course is specifically designed for college bound students who are highly interested and want an in-depth view of the political, social, and cultural accomplishments of the United States from the 1850’s to World War I. The course presents the political, economic, social, and cultural contributions Americans have made both in this country and abroad. This course will challenge the creativity of students in the cognitive domain and higher level thinking skills as well as the use of technology.

10000  **AP U.S. History (WH)**  **Required**  1 Credit
Prerequisites: Successful Completion of World Cultures WH with a “B” or Better or World Cultures with an “A” and English I WH with a “B” or Better or English I with an “A” and Teacher Recommendation
Advanced Placement United States History is designed to enable students to develop analytical skills and acquire a thorough knowledge of United States History. The approach of the course includes, but is not limited to, the following elements: development of substantial knowledge of social, cultural, political, economic, and military events relevant to the history of the United States; development of assessment and interpretive skills; development of geographic awareness; the development of analytical thinking skills, and the development of communication skills through the writing of coherent, analytical essays. The course is intended to be equivalent to a college level introductory course. Consequently, the course is designed to challenge the student. At the conclusion of the course (May) the students will participate in the Advanced Placement United States History Examination **(a fee is involved)**. Students performing adequately on the examination (scores of three, four, or five) may receive university credit for three to six semester hours in United States History. Taking this course as a 10th grader will satisfy the requirements for taking U.S History II, but a third Social Studies course will be required in order to fulfill graduation requirements.
103  
**U.S. History II**  
**Required**  
11  
1 Credit

Prerequisite: Successful Completion of U.S. I

This course is a survey of United States history from the 1920s to the present. This course is designed to expose students to historic concepts and concepts related to the political, economic, social and cultural aspects of the United States and its role in the world. Major topics include the 1920s, the Great Depression, World War II, the cold war, the Vietnam War, civil rights, 1970s and beyond. Topics will be examined incorporating both grade-level texts, primary and secondary sources, and an emphasis on the development of analytical thinking and writing skills.

1030  
**U.S. History II - WH**  
11  
1 Credit

Prerequisites: Successful Completion of U.S. History I with a “B” or Better & Teacher Recommendation

This course is specifically designed for college bound students who are highly motivated and want an in-depth view of United States History from the 1920’s to the present. The course presents the political, economic, social, and cultural contributions Americans have made both in this country and abroad.

105  
**American Systems**  
12  
1 Credit

American Government is a course which emphasizes the rights and responsibilities of citizens and how our government operates in the United States. Students explore the Constitution, its historical developments, and viability over time. Students examine the three branches of government and the processes of the American political system. Students will study voter behavior and citizenship, and the impact constituents have on the political system. It will also examine the relationship among economics, government, and public policy.

1090  
**American Systems - WH**  
12  
1 Credit

Prerequisites: Successful Completion of U.S. History II with a “B” or Better & Teacher Recommendation

This course focuses on the political and economic systems of the American Government with an emphasis on the everyday activities of the government and how it tries to solve some of the major political and economic problems facing the country today. Students will learn the structure of the United States government and its origin. Students will examine the U.S. Constitution and apply its principles throughout the course. Each branch of government will be analyzed and their current members evaluated. Students will study all forms of participation in government including political parties, elections, interest groups, and the mass media. Every student will take part in a culminating project requiring them to work with others to develop a campaign.

1050  
**AP U.S. Government/Politics (WH)**  
12  
1 Credit

Prerequisites: Successful Completion of U.S. History II with a “B” or Better & Teacher Recommendation

This college level course is concerned with the nature of the American Political system, its development over the past 200 years, and how it works today. There will be an examination in some detail of the principal processes and institutions through which the political system functions, as well as some of the public policies that these institutions establish and how they are implemented. At the end of the course, all students are required to take the AP test.
HEALTH and PHYSICAL EDUCATION

7050  Wellness I - H/PE (semester class)  Required  9  .5 Credit
This is the first of three courses to fulfill the graduation requirement for Health and Physical Education. This course will focus on
team sports and team building activities to continue adolescent development in physical education. Students will also be assigned a
health component that will be centered around responsible decision making with an emphasis on Pregnancy/Childbirth, STDs and
adolescent issues.

7051  Wellness II - H/PE (semester class)  Required  10  .5 Credit
Prerequisite: Successful Completion of Wellness I
This is the second course of three required to fulfill the graduation requirement for Health and Physical Education. Students taking this
course must have successfully completed Wellness I. Wellness II will continue to focus on team activities and team sports. Individual
activities will be introduced as well as fitness activities to help students develop an individual lifetime fitness plan. Each student will
also be assigned to aquatics for a session. The aquatics component will focus on water safety and water sports/activities as lifetime
fitness activities. Students will also be assigned to Health session with an emphasis on lifestyle choices centered on Nutrition,
Tobacco Use and other Drug uses.

7052  Wellness III - H/PE  Required  11  1 Credit
Prerequisite: Successful Completion of Wellness II
This is the third required course needed to fulfill the graduation requirement. Student must have successfully completed Wellness I
and II to take Wellness III. Students will continue to build a wellness plan through participation in various individual activities, team
sports/activities and fitness activities. Students will select various activities to create a wellness plan. Students will also be provided
the opportunity to get certification in lifeguarding/CPR/First Aid/AED through the American Red Cross. Students will be assigned a
health component that will focus on the development of an individual wellness plan. Each student must complete a presentation
outlining their individual wellness plan to receive credit for Wellness III.

The following courses are electives that can be chosen during the grades indicated in the course descriptions. They are organized according to content area.
ART ELECTIVES

Note: Students wishing to take Studio courses who have not taken Art Major I and/or Art Major II must present evidence of knowledge with a portfolio of their art work.

*Higher level art courses that use specialized, consumable supplies, may require that students pay a small fee. Arrangements can be made to accommodate individual situations.

601 Art Major I: Drawing & Painting 9, 10, 11, 12 1 Credit
Prerequisite: Art Teacher Recommendation Required/Art Teacher Must Sign off on all Schedule Cards. 9th Grade Students may Apply to this Course only with a Written Recommendation from their Middle School Art Teacher.
This is a foundation course presenting students with a range of techniques and concepts to develop artistic abilities with a strong focus not only on drawing skills, but also in problem solving. This class is for students interested in continuing with the arts and is a prerequisite for all studio classes. Successful completion of this course is required, and will allow students to advance to the following studio courses directly after completion of this course; Jewelry, Sculpture, Ceramics, Photography and Graphic Design. For additional studio courses Art Major II must be completed.

602 Art Major II 10, 11, 12 1 Credit
Prerequisite: Successful Completion of Art Major I with a “B” or Better
This is a continuation of Art Major I with a focus on building and developing students' drawing, painting and design skills. New materials will also be explored to create 2D and 3D artworks. Successful completion of this course is required to advance to the Portfolio Preparation.

604 Art History 9, 10, 11, 12 1 Credit
This course introduces students to the history of art by focusing on the socio/political/cultural connections to visual expressions and representation. Tasks for this course include discussion, research and art making. Students of all art ability levels are welcome, as the focus of the class will be equal parts of history/sociology and project production.

605 Photography 10, 11, 12 1 Credit
Prerequisite: Successful Completion of Art Major I with a “B” or Better
This course encompasses the techniques of digital art making concerning digital photography and graphic design. Computer programs used will be Adobe Photoshop and Adobe Illustrator.

606 Ceramics 10, 11, 12 1 Credit
Prerequisite: Successful completion of Art Major I with a “B” or Better & Teacher Recommendation
Students will gain a strong Foundation in all basic hand building and throwing techniques working with clay to create coils, slabs, sculptural forms, and the potter’s wheel to create functional and non-functional forms. The basics of different clay bodies, glazes and firing techniques will also be studied.

607 Advanced Painting (semester course) 11, 12 .5 Credit
Prerequisite: Successful Completion of Art Major I & II with a “B” or Better
In painting, students will be exposed to a variety of techniques and media with inspiration from an art historical point of view. They will be given an opportunity to express personal creativity through original works of art that exemplify color, design and composition. This course will be paired with Sculpture, course # 613.

608 Jewelry (semester course) 10, 11, 12 .5 Credit
Prerequisite: Successful Completion of Art Major I with a “B” or Better
In Jewelry, students will be introduced to various tools and materials used in metal-smithing and soldering processes. This course incorporates both functional and non-function art making. This course will be paired with Printmaking, course #617.

613 Sculpture (semester course) 10, 11, 12 .5 Credit
Prerequisite: Successful Completion of Art Major I with a “B” or Better
With sculpture students will gain a strong foundation in various media creating both additive and subtractive sculptures using materials such as clay, plaster, wood and recycled materials. This course will be paired with Painting, course # 607.
615  
**Portfolio Studio**
11, 12  
1 Credit

Prerequisite: Successful Completion of Art Major I & II with a “B” or Better
This course is designed for serious art students who have an interest in applying to fine arts programs in college. The objective will be to build and document a strong body of work called a portfolio. Development of the artistic process in assorted media is the goal. College application and portfolio review process will be a component of this course. Also, in this course students will practice advanced drawing techniques, including but not limited to, realistic observational drawing, linear perspective, form and space. These skills will then be applied to cartoon and comic illustration and stylistic narrative art.

617  
**Printmaking (semester course)**
11, 12  
.5 Credit

Prerequisite: Successful Completion of Art Major I with a “B” or Better
Printmaking is an art style that incorporates aspects of drawing and painting to make finished art projects based on prints. Students will complete projects such as silk-screening to make t-shirts, block printing, mono-prints and collagraphs. This course will be paired with Jewelry, course # 608.

621  
**Graphic Design I**
10, 11  
1 Credit

Prerequisite: Successful Completion of Art Major I with a “B” or Better
Students learn the basics of digital design programs; Adobe Photoshop and Illustrator.

6212  
**Graphic Design II**
11, 12  
1 Credit

Prerequisite: Successful Completion of Graphic Design I
Building off skills acquired in Digital Studio: Introduction to Digital Photography and Design, this course is developed to teach advanced graphic design concepts. With heavy emphasis on computer imaging using the Adobe Creative Suite, students will develop composition/layout skills, packaging design, commercial art, illustrations, animations, digital photography, and web page layout.

630  
**Art-Creative Design (semester class)**
9, 10, 11, 12  
.5 Credit

This class is a hands-on elective Art class where students learn about Art relative to different design careers. Design is explored through 2D and 3D arts. Students need no previous experience in Art, just a willingness to try and enrich themselves through art.

**BUSINESS/FINANCE ELECTIVES**

501  
**Introduction to Business**
9, 10  
1 Credit

In a dynamic society where change is inevitable, students must learn to be wise consumers, valued workers, and responsible citizens. This course helps to develop management techniques, marketing concepts, and economic responsibilities. In addition, the course covers such topics as business ownership, investments, recordkeeping and banking. This course is an introductory course for all students who are interested in exploring business.

5010  
**Introduction to Business - WH**
9, 10  
1 Credit

Prerequisite: Letter of Recommendation from Guidance Counselor
In this course students will analyze foundations of the American economy. This course is designed to introduce the fundamentals of business, microeconomics, entrepreneurship, marketing, human resources, financial management policy and accounting. Additional focus will be paid to business ethics, law and career planning. Throughout the course, students will create portions of a unique business plan. Additional learning will be enhanced through reading assignments and related projects.

510  
**Career Technology I**
9, 10, 11, 12  
1 Credit

511  
**Career Technology II**
10, 11, 12  
1 Credit

512  
**Career Technology III**
11, 12  
.5 Credit

Prerequisite: Successful Completion of Career Technology I and II
What does it take to survive in today’s world? How can you increase your net worth? What personal and technical skills and abilities will you need as you go off to college or out to work? Learn the answer to these and other important questions by enrolling in Career Technology. This class will help develop your personal and technical proficiencies essential for a successful future. Learn to use resource materials, budget techniques, balance a checkbook, and record management. Increase your technical proficiency, brush up on computer applications: Internet, word processing, database, spreadsheet and presentation programs. Learn the skills and applications of critical thinking, decision making, and problem solving necessary in your life. Learn how to choose a satisfying and rewarding career, make the right selections based on your aptitudes, personality, and aspirations. Prepare now to live the life you imagined! Students are provided with more than sixty career adventures in Career Technology to prepare for college and/or employment opportunities in our global economy. Individualized instructional areas include business, marketing, communication, service and technology.
521  Advanced Marketing (DECA) - WH  10, 11, 12  1 Credit
Prerequisite: DECA Advisor Recommendation
This course is designed to develop an understanding of marketing processes and the specific skills in selling, advertising, display, business record keeping, merchandising and human relations. Included are basic economics, marketing processes, consumer motivation, techniques of selling, business systems, customer services, business communication, interpersonal relationships and sales promotion activities in the DECA (an association of marketing students) chapter are used to develop leadership abilities. To receive honors credit, students must participate in DECA’s co-curricular competitions and complete a DECA competition project.

522  Sports/Entertainment Marketing  11, 12  1 Credit
This course will discuss why fans and advertisers spend billions of dollars each year on recreational entertainment and related products and services. We will examine and discuss how to organize and develop a Marketing Plan, with emphasis on various strategies that target specific consumers in the field of Sports and Entertainment.

523  Introduction to Marketing  9, 10  1 Credit
Students will investigate topics in advertising, communication, consumer behavior, sports and entertainment marketing, and fashion marketing while learning to promote their ideas, products, and themselves.

524  Entrepreneurship (semester class)  11, 12  .5 Credit
Students will investigate issues in management, business law, and finance. They will develop their own personal business plan and have the opportunity to work with business people from the community who offer real world experience and insight.
*Not offered 2016-2017 school year.

525  Career Exploration (semester class)  9, 10  .5 Credit
Career Exploration focuses on the analysis of current career trends, related technology, workforce diversity, and ways to thrive in a global marketplace. Students’ individual needs are addressed as careers are examined that fit each individuals’ talent and passions. Future career success is promoted by providing students with current and projected career information and building skills in vital areas such as networking, communications, teamwork, problem solving and public speaking.

526  Personal Finance  11, 12  1 Credit
Students will gain an understanding of their consumer rights/responsibilities and basics of credit and the law. Topics will include checking and savings accounts, investing, real estate and risk management pertaining to vehicle, property, life, and health insurance.

527  Accounting Principles  10, 11, 12  1 Credit
Prerequisite: Successful Completion of Algebra I with a “C” or Better
Whether you plan to enter the workforce or continue onto college, this course is a must for those who are interested in or plan to major in business. This one-year introductory financial accounting course will provide a basic knowledge for keeping financial records for both a service and merchandising business. Other areas to be covered include banking, payroll, and accounting for personal use. Automated accounting is taught using industry’s premier accounting software, Peachtree and Microsoft’s Excel Spreadsheet application. The concepts covered in this year-long course are equivalent to a first semester of college accounting, which is required by all business majors. This course satisfies the requirement for a fourth-year high school mathematics course.
*Not offered 2016-2017 school year.

528  Business Law  11, 12  1 Credit
This course provides an understanding of the basic principles of law through the exploration of contracts, ethics, and court procedures. Students will be able to classify criminal and civil law and learn about legal rights and legal duties. Business Law should be taken by students with an interest in law and/or any managerial business field.
*Not offered 2016-2017 school year.

529  Hospitality and Restaurant Marketing  10, 11, 12  1 Credit
This course covers the growth and progress of the hospitality and restaurant industries. This course provides an overview of the various challenges and responsibilities encountered in managing a food and beverage operation. Topics include planning, administration, organization, accounting, marketing and human resources from an integrated managerial viewpoint. Upon completion, students should be able to demonstrate an understanding of the background, context, and career opportunities that exist in the hospitality and restaurant industries.
*Not offered 2016-2017 school year.
530 Marketing/Business Partnership 12 1 Credit
This course is for the senior working in a marketing and/or business related job. Items covered include job problems, employer-employee relations, career choices, benefits, union and management problems. Take with Marketing Co-op (5301).

5301 Marketing Co-Op 12 2 Credits
Co-op offers the students an opportunity to receive high school credit for work experience. The job is considered a class, and the employer is the on-the-job teacher. Students can receive assistance finding a job through the co-op Coordinator or can continue working at an approved workstation. The student will receive a grade and credit based on work performance and work related assignments. Students must also be enrolled in course 530 Marketing/Business Partnership. Coordinator will assist with job placement for students not currently working.

532 Independent Work Study 12 1 Credit
Independent work-study program will assist all qualified students in the transition from school to career. In conjunction with area businesses, Norristown Area High School offers the work-study program so that students can earn high school credit while gaining experience in a business/work environment. Students must meet the entrance requirements and must remain eligible according to the program guidelines. This program will be supervised by a member of the high school faculty and will include activities, weekly journals, resume writing, time management instruction, site visitations and quarterly reports, and close collaboration between the employers and the co-op Coordinator.

ENGINEERING and TECHNOLOGY ELECTIVES

The Engineering path in the Project Lead the Way (PLTW) national engineering program emphasizes critical thinking, creativity, innovation and real-world problem solving. The hands-on learning engages students on multiple levels, exposes them to areas of study that they may not otherwise pursue, and provides them with a foundation and proven path to post-secondary training and career success in STEM-related fields. To enroll in PLTW courses students should have:

- a ‘B’ average or better in Algebra I,
- Students should have interests in any of the following: Computers, Science, Math and Art.

PLTW courses are Weighted Honors and by meeting grade requirements students can purchase college credits that are transcripted and have a letter grade from sponsoring universities.

There is also a more traditional hands-on path that prepares students for Central Montgomery Technical High School and gaining basic knowledge of tool use and safety through projects in wood and the creation of models in various formats.

656 PLTW - Introduction to Engineering Design - WH 9, 10, 11, 12 1 Credit
Prerequisite: Successful Completion of Algebra I with a “B” or Better
A pre-engineering foundation course that is activity and project based. IED is based on learning engineering design principles and concepts through sketching, computer modeling and hands-on lab experiences. All learning concepts are founded in algebra, geometry and physics. Projects include puzzle cube project, completing a toy train that is animated and moves on tracks and reverse engineering a toy car. Students with computer aptitude and that enjoy hands on learning should apply.

657 PLTW - Civil Engineering and Architecture – WH 10, 11, 12 1 Credit
Prerequisite: Successful Completion of Introduction to Engineering Design
Students learn about various aspects of civil engineering and architecture and apply their knowledge to the design and development of residential and commercial properties and structures. In addition, students use 3D design software to design and document solutions for major course projects. Students communicate and present solutions to their peers and members of a professional community of engineers and architects.

658 PLTW - Digital Electronics – WH 10, 11, 12 1 Credit
Prerequisites: Introduction to Engineering Design
A core course of study in the PLTW program, this introductory pre-engineering course develops students' logical thinking skills by solving problems and designing control systems. Students will gain a better understanding of the digital circuits through experiences in binary math which is used in the coding of apps and gaming systems, the use of gates and IC chips and how to properly modulate the power through resistors, capacitors, timers and other electronic circuitry.
ENGLISH and COMMUNICATION ELECTIVES

0060  Problems in Philosophy - WH  11, 12  1 Credit
Prerequisite: Successful Completion of English II or English III with a “B” or Better
Problems in Philosophy is a year-long course that looks at the history of ideas from a subject rather than chronological approach. The course covers important but more independent philosophers including Maimonides, Spinoza, Nietzsche and Rawls. The course approaches major issues in academia and society including issues in philosophy of religion, philosophy of art, philosophy of mind and contemporary questions discussed by philosophy including Bioethics, economic ethics, technological advancement, and political justice. Students encounter these questions with support of primary source reading, podcasts, literature, film and art. This is a discussion class focusing on reading, conversation and writing in the standard seminar-style college format.
*Course not offered 2016-2017 school year.

011  World of Writing (semester class)  10, 11  .5 Credit
Prerequisite: Successful Completion of English I
This half-year elective course emphasizes the art of creative writing in all modes, including poetry. Throughout the semester, students will write short stories, personal narratives, essays, and poetry. Special attention will be paid to the development of style in this class. Students who take World of Writing will also contribute to The Scribbler, the Norristown Area High School Literary Magazine.

012  Shakespearean Literature  10, 11, 12  1 Credit
This course will be an in-depth study of the works of William Shakespeare. Students will compare common themes found throughout Shakespeare’s plays, analyze text structure and language use, explore the reasons for Shakespeare’s endurance throughout time, and evaluate the influence of Shakespeare in modern literature and other media. Students will be exposed to plays from all three Shakespearean genres: comedies, histories, and tragedies. Course materials will include: Henry V, Richard III, King Lear, Twelfth Night, Taming of the Shrew, and A Midsummer’s Night Dream.
013  
School Publications  
9, 10, 11, 12  
1 Credit  
Prerequisite: Teacher Recommendation from previous year’s English Teacher is needed  
The School Publications I course is the first step to earning staff membership with the school’s newspaper, The Wingspan. The course will include law and ethics, as well as an introduction to news literacy, content planning, interview tactics, various writing techniques, critical proofing (editing), and marketing in print media. During the course students will be expected to have published an online profile through The Wingspan site (www.nahswingspan.com), acquire sponsorships, participate in content building with editors and other staff members, and publish at least two stories in The Wingspan (online newspaper or hard copy).

0131  
School Publications II  
10, 11, 12  
1 Credit  
Prerequisite: Successful Completion of School Publications with a “C” or Better  
Students will continue and deepen their study of print media in the area of ethics, as well as an introduction to news literacy, content planning, interview tactics, various writing techniques, critical proofing (editing), and marketing in print media. In particular, School Publications II students will learn and practice the structure and content of feature, column, editorial and sports writing, as well as compose polls, profiles, briefs, and reviews. Students will also examine current trends in advertising and circulation with specific sales and marketing goals. During the course students will be expected to update their online profiles through The Wingspan site (www.nahswingspan.com), acquire sponsorships, participate in content building with editors and other staff members, and publish at least eight stories in The Wingspan (online newspaper or hard copy).

*Students in this course are permitted to hold “officer” positions with The Wingspan.

0132  
21st Century Journalism  
11, 12  
1 Credit  
Prerequisite: Successful completion of School Publications II course with a “C” or Better  
Students will continue and deepen their study of print media in the area of ethics and begin study in the areas of web-based journalism. In addition, School Publications III students will study the nuances of design including: format, graphics, layout, typography, color, and space in print media. School Publications III students will draw on skills learned in School Publications I and II to practice the structure and content of feature, column, editorial and sports writing, as well as compose polls, profiles, briefs, and reviews. Students will be responsible for organizing and coaching the marketing and sales teams within The Wingspan organization and establishing specific sales and marketing goals. During the course students will be expected to update their online profiles through The Wingspan site (www.nahswingspan.com), acquire sponsorships, participate in content building with editors and other staff members, and publish at least eight stories in The Wingspan (online newspaper or hard copy).

*Students in this course are encouraged to hold “officer” positions with The Wingspan.

0133  
Advanced Journalism  
12  
1 Credit  
Prerequisite: Successful completion of 21st Century Journalism course with a “C” or Better  
The School Publications IV course is designed to be a practicum for students. It will include study and practice in the areas of multi-platform journalism, scamp building as well as management of staff, timeline, budget, and product management. During the course students will be expected to update their online profiles through The Wingspan site (www.nahswingspan.com), acquire sponsorships, participate in content building with editors and other staff members, assume a leadership or mentor roll to less-experienced staff and publish at least eight stories in The Wingspan (online newspaper or hard copy). Students in the course will work as a team to cultivate ideas of the staff and student body to produce publications that are reflective of the Norristown Area High School experience.

*Students in this course are required to hold “officer” positions with The Wingspan.
**Course not offered 2016-2017 school year.

044  
Library Science  
12  
1 Credit  
Prerequisite: Librarian Recommendation  
In this elective, students will learn all aspects of working in a library setting: library skills such as shelving, book & magazine processing, cataloging, develop research skills while assisting library patrons, clerical skills, and work on interpersonal skills. Students will also assist in scheduling and distribution of audio-visual materials.

045  
Video Production  
10, 11, 12  
1 Credit  
Prerequisite: Permission from Telecommunications Teacher  
This course emphasizes basic handling and operation of television equipment and the various roles of video production, including in-studio and on-location video-taping of school district programs and post production. The course requires students to produce their own programming. Students will also record, edit, and complete programs for various county and municipal groups requiring responsible shooting time after school hours. Students will also be familiarized with the power of the media and how production design influences the impact of video. Admission to course is by written permission of the Telecommunications teacher.
046  
**Video Production II**  
11, 12  
**1 Credit**

**Prerequisite:** Permission from Telecommunications Teacher

Video Production II: Students in Video Production II will enhance their basic communications skills. These students will focus on directing and segment editing for NASDtv programming as well as learning and practicing the role of producer for class productions. The students will perform advanced editing, graphic animations, sound editing and color correction techniques. The course retains its practical focus offering second year students additional responsibilities, additional technologies and additional opportunities for independent video creation.

069  
**Study Skills Seminar (semester class)**  
9, 10  
**.5 Credit**

This semester course is designed to give students the keys needed to be successful learners while attending Norristown Area High School and beyond. This course will focus on study skills and leadership techniques. Each class meeting will center on one aspect of success; responsibility, respect, ambition, conflict resolution, organization, and note taking skills. Students will also explore the most frequently encountered roadblocks to success and learn how to navigate around them. Students will participate in class discussions and activities, keep a reflection journal and create a culminating presentation based on one “key” explored during the course. Improvement of study and academic skills will be the central focus of this half-year course.

1010  
**Discussions Literature/Philosophy – WH**  
11, 12  
**1 Credit**

**Prerequisite:** Successful Completion of English II or English III with a “B” or Better

This course will enrich students using works of literature and philosophy in areas ranging from war poetry to Dadaism, from metaphysics to issues of citizenship. The material read for class will be used to support discussions of contemporary philosophic ideas and classic literary movements to develop critical thinking, cultural awareness, and personal academic responsibility. Using the Socratic Method, project based assessment and written assignments, students will reflect on the literary ideas and their philosophic roots. This is an intensive reading and discussion course with a strong writing component, both critical and creative.

*Not offered 2016-2017 school year.*

**FAMILY CONSUMER SCIENCE ELECTIVE**

676  
**Family Consumer Science (semester class)**  
9, 10, 11, 12  
**.5 Credit**

This course will follow the four areas highlighted in the PA Core Standards. Areas included are: Financial and Resource Management, Balancing Family, Work and Community Responsibilities, Food Science and Nutrition and Child Development. Topics in each area will be relevant to all students. Activities will include group and individual projects, presentations and labs.

*Students who have completed a Family Consumer Course in preceding years cannot take this course.*

**HEALTH AND PHYSICAL EDUCATION ELECTIVES**

7053  
**Wellness IV - H/PE**  
12  
**1 Credit**

**Prerequisite:** Successful Completion of Wellness III

Any student taking Wellness IV must have completed all other wellness courses and have completed an individual wellness plan. Students will use their individual plan while taking part in Wellness IV. Students will also have the opportunity to get certified in lifeguarding/CPR/First Aid/AED through the American Red Cross.

7054  
**Advanced Physical Education**  
12  
**1 Credit**

**Prerequisite:** Successful Completion of Wellness III & Teacher Recommendation

*Note: this course is an elective and does NOT satisfy the PE requirements.* This course is designed for students who have a strong interest in physical education, a competitive nature and/or interested in learning some non-traditional sports as well as their history and theory. Students will exposed to classroom-style instruction in addition to activity, and will explore a topics not covered in the traditional PE program including planning activities and learning techniques to teach others (recreation, camps).

7055  
**Life Fitness & Recreation**  
12  
**1 Credit**

*Note: this course is an elective and does NOT satisfy the PE requirements.* This course includes classroom exploration of relationships between diet, exercise, proper nutrition, and goal setting in regard to performance. Physical education games emphasizing cardiovascular conditioning as well as performance in the fitness center and weight room will be emphasized. Activities will be geared toward weight control, muscle toning, and cardiovascular improvement including fitness walking, jogging, running, biking, lifetime activities and recreational games.
7056  EXERCISE SCIENCE  11, 12  1 Credit
Prerequisite: Wellness II and Wellness II
*Note: this course is an elective and does NOT satisfy the PE requirements. This is an elective class that students may take in addition to their regularly scheduled physical education class, not in place of. Rigorous learning objectives for this course are designed to promote and reinforce healthy and physically active lifestyles which can be maintained throughout all phases of life. All students will learn how to assess and improve the measurable components of fitness; muscular strength and endurance, power, flexibility, agility, speed, cardio-respiratory endurance, and body composition. After testing individual fitness levels, this course will provide opportunities for students to participate in a daily resistance training and fitness plan which is customized to achieve personally designed goals. Students are introduced to Anatomy and Physiology as well as Kinesiology and Biomechanics through an in depth investigation of muscular structure, action and energy systems, providing each student with a deeper understanding of why physiological changes are brought on by exercise, and how to manipulate those changes. Individual research opportunities in nutrition, weight management, sport/skill specific training and other student-selected topics will help foster a greater understanding of the benefits of training and a healthy, active physical lifestyle.

7057  SWIM INSTRUCTOR/LIFEGUARD COURSE  12  2 Credits
Prerequisite: Successful Completion of Wellness I, Wellness II and Wellness III
*Note: this course is an elective and does NOT satisfy the PE requirements. This course is designed for students interested in becoming swim instructors for the 4th grade Learn to Swim Program in addition to becoming American Red Cross Lifeguard certified. Students will assist the PE teacher with swim lessons, safety lessons and games in the pool. Students with a strong desire to help others, especially young children, will find this a rewarding course. In addition, students will complete prescribed ARC Lifeguard course consisting of certification in First Aid, CPR, AED as well as Water Rescue. This course will meet for two periods a day.

JUNIOR ROTC

9291  Junior ROTC: LET I  9, 10, 11, 12  1 Credit
Junior ROTC Leadership Education & Training (LET I) is designed to teach students the value of citizenship, leadership, service to the community, personal responsibility, and a sense of accomplishment while instilling in them self-esteem, teamwork, and self-discipline. Its focus is reflected in its mission statement, "To motivate young people to be better citizens." It prepares high school students for responsible leadership roles while making them aware of their rights, responsibilities, and privileges as American citizens. There are six core blocks of instruction including Character and Leadership Development; Leadership Theory and Application; Foundations for Success; Wellness, Fitness, and First Aid; Geography and Earth Science; and Citizenship and American History. Junior ROTC is not a recruitment tool. Its focus is on developing young people and orienting them positively in preparation for whatever role in life they might choose. The levels of responsibility for LET II, LET III, and LET IV students (2nd, 3rd, and 4th year cadets respectively) increases with each additional year in the program.

9292  Junior ROTC: LET II  10, 11, 12  1 Credit
Prerequisite: Successful Completion of LET I (9291)
LET II cadets are placed into entry level leadership positions responsible for training and induction the first year LET Is. Their curriculum focuses on Wellness, Fitness and First Aid, Geography and Earth Science, and Physical Fitness.

9293  Junior ROTC: LET III  11, 12  1 Credit
Prerequisite: Successful Completion of LET I (9291) & LET II (9292)
LET III cadets are mid-level leaders responsible for commanding the companies in the battalion. Advanced levels of leadership training and greater leadership opportunities are the primary focus for third year cadets. Their curriculum focuses on Leadership Theory Application, Foundations for Success, Wellness Fitness and First Aid, Financial Planning, and Community Service.

9294  Junior ROTC: LET IV  12  1 Credit
Prerequisite: Successful Completion of LET I (9291), LET II (9292) & LET III (9293)
The LET IV cadets command the battalion and hold the key staff functions of Personnel, Logistics, and Operations. The battalion Service Learning Project is planned and executed by LET IVs. Their curriculum focuses on Leadership Theory and Application, citizenship and American History, and Community Service.
MUSIC ELECTIVES

624 Choir
This introductory choir is open to all students. Students will learn how to improve their voices by learning proper singing techniques and skills. They will learn to read music through sight singing, rhythm skills, and understanding musical terms and markings. Credit will be earned through class participation, performance evaluations and attendance at scheduled performances.

632 Norristown Eagles Pep Band/Concert Band
Prerequisite: Minimum of 1 year of School or Private Lessons on a Concert Band Instrument
Pep Band enables instrumental music students to be a part of an ensemble that will perform at various sporting events such as home football games and other school/community functions. As members of the Pep Band, students will also be a part of the Norristown Concert Band. Students will spend each class preparing musical repertoire for both ensembles. Prior training and experience on preferred instrument is required. Credit is earned through mastering the skills of musicality, class participation, and attendance at performances.
Note: This is a wonderful opportunity for guitarists (bass, acoustic, or electric), experienced piano players (acoustic or electric), and drum set players. All experienced musicians who play band instruments are welcome.

633 Norristown Eagles Jazz Band/Concert Band
Prerequisite: Minimum of 1 year of School or Private Lessons on a Concert Band Instrument
Jazz Band enables instrumental music students to participate in an ensemble which studies and performs Jazz repertoire. As members of the Jazz Band, students will also be a part of the Norristown Concert Band. Students will spend each class preparing musical repertoire for both ensembles. In addition, if students in this ensemble would like to be a part of the pep band as well, access to the music and membership will be granted (although class time will not be allocated towards preparing this repertoire). Prior training and experience on preferred instrument is required. Credit is earned through mastering the skills of musicality, class participation, and attendance at performances.
Note: This is a wonderful opportunity for guitarists (bass, acoustic, or electric), experienced piano players (acoustic or electric), and drum set players. All experienced musicians who play band instruments are welcome.

634 Orchestra
Prerequisite: Minimum of 1 Year of School or Private Lessons on an Orchestral String Instrument
Orchestra enables orchestral string players to perform in a large ensemble. Students will continue studies on their primary string instrument and practice their mastery of skills, including tuning, care and maintenance, and performance technique. Students will be introduced to a wide variety of strong orchestra literature, both in the classical and contemporary settings. This class serves as an advanced continuation of previous orchestral settings, such as private lessons or middle school orchestra programs. Credit is earned through performance assessments, class participation, and concert attendance.

635 Select Strings
Prerequisite: Audition Required
Select string ensemble focuses on advanced string technique and college level repertoire. Students in this class will be required to play the music of the string orchestra, attend those concerts, and attend additional performances throughout the year. Participation in the Montgomery County Honors String Orchestra is mandatory. This class will prepare students for all events mentioned, as well as college auditions.

636 Piano I
This course is designed as an introduction to piano and fundamental music theory. No prior musical knowledge is necessary as this class is organized for a beginner to learn from the ground up. Students will become musically literate as well as learn the fundamental techniques for playing the piano. Students will be able to perform and compose basic piano music.

640 Guitar I
This course is designed as an introduction to the guitar. Students will learn the proper techniques such as posture, finger placement, tone production, care of instrument, and tuning. They will also learn various strumming patterns, open and barre chords, note-reading in treble clef, tablature, ensemble playing, composition, and performance practice.

641 Guitar Ensemble
Prerequisite: Successful Completion of Guitar I with a Grade of a “B” or Better AND Department Recommendation
This course is an expansion of Guitar I, and is designed for the second year and more advanced student. Students will utilize all concepts from Guitar I and will additionally learn scales, classical, blues, and advanced ensemble playing. Evening concerts in December and May are mandatory. Credit is earned through performance assessments, class participation, and concert attendance.
644  Select Choir  10, 11, 12  1 Credit
Prerequisite: Audition Required
Select Choir and Select Strings teach advanced level technique through the use of challenging high school and college level music. The Select Choir participates in Tri-County Honors Choir Festival. The Honors Orchestra participates in the Montgomery County Honors String Orchestra Festival. Students are required to attend the festivals, evening concerts throughout the year, and community performances. Enrollment is determined by audition or teacher placement.

645  Music Theory  10, 11, 12  1 Credit
Prerequisite: Successful Completion of at Least 1 Year of Band, Orchestra, or Piano with a Grade of a “B” or Better
Students will learn to analyze and create traditional western music. The ability to read and write musical notation is fundamental to such a course. It is assumed that the student has acquired (or is acquiring) at least basic performance skills in voice or on an instrument. Students interested in this course should be aware that they will be required to sing (known as sight-singing) on a daily basis. Students will be required to compose and perform their own pieces of music by the end of the course. This course is the prerequisite for the AP Music Theory course. Students must pass this course with a B or higher in order to enroll in AP Music Theory.

6450  AP Music Theory  11, 12  1 Credit
Prerequisite: Successful Completion of Music Theory with a Grade of a “B” or Better
This course is designed to prepare students for college-level music theory classes and for the Advanced Placement Music Theory exam. Students will learn to analyze and create traditional, western music. The ability to read and write musical notation is fundamental to such a course. It is assumed that the student has acquired basic performance skills on an instrument. Students interested in this course should be aware that they will be required to sing (known as sight-singing) on a daily basis. Students are also required to take the AP Music Theory exam. Students can bypass “Music Theory” and enter AP Music Theory by successfully passing the Entrance Exam, showing they are proficient on an instrument, and providing a NAHS Music Teacher’s Recommendation. Students must receive a letter of recommendation for this course from a NAHS Music Teacher.

PERFORMING ARTS ELECTIVES

022  Speech & Debate  10, 11, 12  1 Credit
Prerequisite: This course is open to all 11th and 12th graders. 10th Grade Students Must either Have Successfully Completed Intro to Public Speaking with an “A” or Earned a “B” or Better in English
This full-year course will be an intensive study of the art of public speaking and formal debate. Throughout this course, students will learn the art of rhetoric and use their skills to analyze speeches and craft speeches of their own for a variety of settings. There will be a special emphasis on persuasive speech and debate in this course, and students would expect to work in-depth with a variety of issues and topics. The ability to construct and sustain logical arguments is an important skill, and this course builds upon the principles of Intro to Public Speaking and helps students take their debate skills to the next level.

023  Intro to Public Speaking (semester class)  9, 10  .5 Credit
This half year course is designed to help students become more comfortable speaking in front of people. This is a skill that is vital to performing arts, but also to many other careers. In this introductory course, you should expect to look at yourself critically and allow others to look at you critically. There will be many formal and informal speeches/presentations throughout the course as well as a special emphasis on body language, vocal performance and effective presentation strategies. Students will complete a variety of speeches, role-plays, and activities with a focus on practical, every-day applications.

661  Acting  10, 11, 12  1 Credit
In this workshop style course, students will learn the elements and principles of acting. Students will perform daily in front of their classmates and are expected to memorize lines for monologues, scenes, and plays. Writing, in the form of character biographies, peer feedback, and reflection, will also be an integral part of this course.

667  Acting II  11, 12  1 Credit
Prerequisite: Successful Completion of Acting
In this workshop style course, students will continue to learn the elements and principles of acting. Students will perform daily in front of their classmates and are expected to memorize lines for monologues, scenes, and plays. Writing, in the form of character biographies, peer feedback, and reflection, will also be an integral part of this course.
**Academic & Technical Theatre**  
9, 10, 11, 12  
1 Credit  
A survey of all aspects of theatre including history, playwriting, performance skills, production techniques, and business knowledge will be presented in this course. There is also an emphasis on the specialized skills necessary to produce a play, such as designing and building sets, costumes, props, lighting, sound and publicity.

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**SCIENCE ELECTIVES**

303  
**Biology II**  
11, 12  
1 Credit  
Prerequisite: Successful Completion of Biology I  
This course is a continuation of Biology I, concentrating on the structure and function of organisms in the five kingdoms. Laboratory investigations include the dissection of various invertebrates and vertebrates. The subject matter is designed for students who wish to continue their studies in the area of life sciences.

3040  
**Anatomy and Physiology - WH**  
11, 12  
1 Credit  
Prerequisite: “B” or Better in Biology I  
Human Anatomy and Physiology is a laboratory science course that includes an in-depth study of the body systems that maintain homeostasis from anatomical and physiological perspectives. Students explore anatomical and physiological concepts of the ten major body systems through an inquiry-based approach which includes the dissection of owl pellets, cats, pigs, and sheep brains. Assessments in this course are hands-on as well as text based. Students interested in the healthcare profession will find this course sets a great foundation for future learning.

309  
**Forensics**  
11, 12  
1 Credit  
Prerequisite: Successful Completion of Biology I  
This course focuses on the collection, identification and analysis of crime scene evidence to determine who committed the crime and how. Emphasis will be placed on the procedures that link suspect, victim, and crime scene. The methodology a forensic scientist uses will be studied through numerous lab experiments, guest speakers and a field trip to the Montgomery County Detective Bureau. Assessments in this course will be hands-on as well as text based. Students interested in a criminal justice career will find this course rewarding.

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**SOCIAL STUDIES ELECTIVES**

104  
**Civics (semester class)**  
9, 10  
.5 Credit  
Civics examines the roles citizens play in the political, governmental and economic systems in the United States. Students will examine the Constitution of the United States, will identify the rights, duties and responsibilities of citizens and will describe the structure and operation of government at the local, state and national levels. Students will investigate the process by which decisions are made and explain the government’s role in it. Students will have an understanding of American geography, economics and government.

106  
**European History**  
11, 12  
1 Credit  
This college readiness course is of particular interest to those students who are interested in going to college and need support fine-tuning their academic skills. By examining European History, students will acquire a thorough understanding of those skills and learn how to become quality scholars. The teacher will use coaching techniques to encourage growth in a supportive and enriching environment. Students will learn how to make claims, to investigate evidence to support them, and to draw original conclusions. Student will focus on learning reasoning, logic, argumentation, rhetoric, and structure, skills that will enhance their performance during their transition to college.

1060  
**AP Modern European History (WH)**  
11, 12  
1 Credit  
This course is offered to students who would like to advance their study of European History in order to prepare for the Advanced Placement Test, and will prepare them to do the necessary essay writing that would accompany such a test. The course enables students to understand the principle themes in European History and to prepare for an in-depth analysis of those themes. Students will be challenged with how to communicate these themes and relate them to both European history and history of Western Civilization. At the end of the course, all students are required to take the AP test.
107 Sociology 11, 12 1 Credit
This course is an examination of the culture and structure of human societies. The course focuses on social groups and institutions, their norms, values and beliefs. Topics of discussion will include the family, education, deviance, race and ethnicity, gender roles, societal change, and social inequalities.

118 Psychology 10, 11, 12 1 Credit
In this course students survey the research and theories of the science of human behavior with a particular focus on human mental processes. Among the topics discussed are development, learning, memory, perception, personality, motivation, social behavior, abnormal behavior and therapy. Also included is an introduction to the various careers associated with psychology. Key to the study of psychology is the scientific method and how it is applied to the analysis and measurement of individuals and groups.

1180 AP Psychology (WH) 10, 11, 12 1 Credit
This course will introduce students to the systematic and scientific study of behavior and mental processes of human beings and animals. Students are exposed to the physical facts, principles and phenomena associated with the major subfields within psychology. Students will also learn about the method psychologists’ use in their science and practice. At the end of the course, all students are required to take the AP test.

128 Law 9, 10, 11, 12 1 Credit
Law is a rigorous law-related education class that gives students a practical understanding of our laws and legal system. This course focuses on legal issues relevant to students’ lives and develops knowledge and skills essential in our law-oriented society using critical thinking and reasoning, communication and problem solving. Students will gain a basic understanding of the fundamental principles and values underlying in the U.S. Constitution, and how it influences both civil and criminal law, as well as focusing on juvenile, family, and consumer law.

1300 AP Human Geography (WH) 11, 12 1 Credit
This course analyzes the fundamental concepts of geography and helps students develop critical thinking skills through the understanding and application of the field. This course focuses on the key concepts of geography as a field of inquiry dealing with the following areas of geography respectively, cultural, political, agricultural, industrial, rural, economic, city and urban planning as well as population problems. At the end of the course, all students are required to take the AP test.

108 African-American History 9, 10 .5 Credit
This introductory course, both intensive and extensive, provides an interdisciplinary study of important themes and topics central to the study of experiences of African Americans in the United States. Students will explore theoretical questions, methodological approaches, and major themes that have shaped African American life and culture in the United States. The course begins with classical African civilizations and then explores the impact of African-Americans on the development of the United States. The course is taught using and secondary sources.
# WORLD LANGUAGE ELECTIVES

To progress to the next level, a student must earn at least a C and/or have the teacher's recommendation. Many colleges and universities require a minimum of 2 years of the same world language to be considered for admission. More selective colleges and universities may be interested in seeing students take 3 or 4 years of the same world language.

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<tr>
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<tr>
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<td>4020</td>
<td>French III – WH</td>
<td>11, 12</td>
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</table>

*Prerequisite: Successful Completion of French I or French I-WH with a “C” or Better & Teacher Recommendation*  
This introductory course is for students who have never studied the language or have minimal/limited prior knowledge of or exposure to the language. Students are exposed to basic vocabulary and grammar and learn to communicate about themselves, their families, restaurants, and leisure activities. The four skills of listening, speaking, reading, and writing are emphasized. Students are exposed to the customs and the culture of the target language. The course’s workload and material are more challenging and include additional material (vocabulary, grammar concepts) and advanced activities (unstructured dialogue, more in-depth readings) presented at an increased pace.

*Prerequisite: Successful Completion of French II with a “B” or Better & Teacher Recommendation*  
The second year builds upon the first year’s program. Vocabulary development, more complex grammatical structures and additional verb tenses are emphasized. Students learn to communicate about preferences, vacations, celebrations, and gastronomy through more in-depth oral and written activities. Increased proficiency in listening and speaking is expected. More sophisticated readings are introduced. Students are expected to write original paragraphs and short compositions in the target language. The study of the culture and customs of the target language is continued through readings, videos and other media in the target language.

*Prerequisite: Successful Completion of French I with a “B” or Better*  
The second year builds upon the first year’s program. Vocabulary development, more complex grammatical structures and additional verb tenses are emphasized. Students learn to communicate about preferences, vacations, celebrations, and gastronomy through more in-depth oral and written activities. Increased proficiency in listening and speaking is expected. More sophisticated readings are introduced. Students are expected to write original paragraphs and short compositions in the target language. The study of the culture and customs of the target language is continued through readings, videos and other media in the target language.

*Prerequisite: Successful Completion of French I & French II with a “C” or Better*  
Increasingly sophisticated vocabulary and grammatical skills are developed in conjunction with improved listening, speaking, reading, and writing abilities. Additional verb tenses are introduced. More complex reading and writing assignments are part of the course. Students learn to communicate about health, technology, driving, and occupations through advanced oral and written activities. Cultural awareness continues to be developed through readings, and the use of other media in the target language.

*Prerequisite: Successful completion of French II or French II-WH with a “B” or Better & Teacher Recommendation*  
Increasingly sophisticated vocabulary and grammatical skills are developed in conjunction with improved listening, speaking, reading, and writing skills in accordance with ACTFL guidelines for World Languages in order to communicate better in the language. Additional verb tenses are introduced. Students learn to communicate about health, technology, driving, and occupations through advanced oral and written activities. More complex reading and writing assignments are part of this course. Cultural awareness continues to be developed through the study of francophone cultures through the use of newspapers, magazines, music, film, and literature. The course’s workload and material are more challenging and include additional material (vocabulary, grammar concepts) and advanced activities (unstructured dialogue, more in-depth readings) presented at an increased pace.
### French IV

**Prerequisite:** Successful Completion of French III or French III-WH with a “B” or Better & Teacher Recommendation

Increased emphasis is placed on oral proficiency as well as written self-expression in the target language. A grammar review is combined with the introduction of the remaining essential grammar topics. Readings are in the target language. More sophisticated writing is expected. Thematic units such as science and technology, key francophone figures, and the environment are studied. Cultural topics are conveyed through the use of authentic resources such as magazines, videos, and internet resources.

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<th>Prerequisite</th>
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<tbody>
<tr>
<td>403</td>
<td>French IV</td>
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### French IV - WH

**Prerequisite:** Successful Completion of French III or French III - WH with a “B” or Better & Teacher Recommendation

Increased emphasis is placed on oral proficiency as well as written self-expression in the target language. A grammar review is combined with the introduction of the remaining essential grammar topics. Readings are in the target language. More sophisticated writing is expected. Thematic units such as science and technology, key francophone figures, and the environment are studied. Cultural topics are conveyed through the use of authentic resources such as magazines, videos, and internet resources. The course’s workload and material are more challenging and include additional material (vocabulary, grammar concepts) and advanced activities (unstructured dialogue, more in-depth readings) presented at an increased pace.

### Spanish for Heritage Speakers I

**Prerequisite:** Primary Language spoken by the student at home is Spanish. Student must be able to speak, read, and write Spanish to some extent. A placement test will be used to determine the level of proficiency and placement for each student.

Students will improve their current speaking, reading, and writing skills in Spanish. The purpose of this course is to improve academic language and literacy skills for Spanish-speaking students and build an appreciation for Hispanic culture through a variety of literature, including poems, novels, and short stories. Students will also develop and improve skills in other areas of study through cross-curricular study of other disciplines while improving their Spanish skills. The course enhances literacy, improves language skills, and develops cross-cultural understanding for Spanish heritage speakers. It is conducted completely in Spanish.

### Spanish I

The first level of Spanish is appropriate for those students who have never studied Spanish or have had minimal prior knowledge or limited exposure to the language. Students are introduced to basic grammar and vocabulary. Students develop the four basic language skills of listening comprehension, speaking, reading, and writing through units with themes revolving around the aspects of life in the many Spanish-speaking countries. Students are introduced to customs and cultures of the many countries that speak Spanish. In addition, students will be exposed to cultural enrichment in a weekly lesson that focuses on different styles of music from Spain and Latin American countries.

### Spanish I - WH

**Prerequisite:** 8th Grade English Teacher Recommendation

The first level of Spanish is appropriate for those students who have never studied Spanish or have had minimal prior knowledge or limited exposure to the language. Students are introduced to basic grammar and vocabulary. Students develop the four basic language skills of listening comprehension, speaking, reading, and writing through units with themes revolving around the aspects of life in the many Spanish-speaking countries. Students are introduced to customs and cultures of the many countries that speak Spanish. In addition, students will be exposed to cultural enrichment in a weekly lesson that focuses on different styles of music from Spain and Latin American countries. The course’s workload and material are more challenging and include additional material (vocabulary, grammar concepts) and advanced activities (unstructured dialogue, more in-depth readings) presented at an increased pace.

### Spanish II

**Prerequisite:** Successful Completion of Spanish I with a “C” or Better

The second year builds upon the first year's program. Vocabulary development, more complex grammatical structures, and additional verb tenses are emphasized. Increased proficiency in listening and speaking is expected. More sophisticated readings are introduced. Students are expected to write original paragraphs and short compositions in the target language. The study of the culture and customs of the target language is continued through readings, videos, and other media in the target language. Students will also be exposed to cultural enrichment in a weekly lesson that focuses on famous historical figures from Spain and Latin American countries.
4130  
Spanish II - WH  
10, 11, 12  
1 Credit

Prerequisite: Successful Completion of Spanish I or Spanish I-WH with a “B” or Better & Teacher Recommendation

The second year builds upon the first year's program. Vocabulary development, more complex grammatical structures, and additional verb tenses are emphasized. Increased proficiency in listening and speaking is expected. More sophisticated readings are introduced. Students are expected to write original paragraphs and short compositions in the target language. The study of the culture and customs of the target language is continued through readings, videos, and other media in the target language. Students will also be exposed to cultural enrichment in a weekly lesson that focuses on famous historical figures from Spain and Latin American countries. The course’s workload and material are more challenging and include additional material (vocabulary, grammar concepts) and advanced activities (unstructured dialogue, more in-depth readings) presented at an increased pace.

414  
Spanish III  
11, 12  
1 Credit

Prerequisite: Successful Completion of Spanish I & Spanish II with a “C” or Better

Students continue to increase their knowledge of Spanish with an in-depth study of advanced grammar and vocabulary. There is focus on meaningful conversation in Spanish with increased emphasis on listening, speaking, reading and writing. Students will be expected to write short compositions in Spanish and to read short stories and/or novels. Students are also further exposed to Spanish-speaking people and cultures.

4140  
Spanish III - WH  
11, 12  
1 Credit

Prerequisite: Successful completion of Spanish II or Spanish II-WH with a “B” or Better & Teacher Recommendation

Students continue to increase their knowledge of Spanish with an in-depth study of advanced grammar and vocabulary. There is focus on meaningful conversation in Spanish with increased emphasis on listening, speaking, reading and writing. Students will be expected to write short compositions in Spanish and to read short stories/novels. Students are also further exposed to Spanish-speaking people and cultures. The course’s workload and material are more challenging and include additional material (vocabulary, grammar concepts) and advanced activities (unstructured dialogue, more in-depth readings) presented at an increased pace.

415  
Spanish IV  
11, 12  
1 Credit

Prerequisite: Successful Completion of Spanish I, Spanish II, & Spanish III with a “C” or Better

Increased emphasis is placed on oral proficiency as well as written self-expression in the target language. A grammar review is combined with the introduction of the remaining essential grammar topics. Readings are in the target language. More sophisticated writing is expected. Cultural topics are conveyed through the use of authentic resources such as magazines, videos, and internet resources.

4150  
Spanish IV - WH  
11, 12  
1 Credit

Prerequisite: Successful Completion of Spanish III or Spanish III - WH with a “B” or Better & Teacher Recommendation

Increased emphasis is placed on oral proficiency as well as written self-expression in the target language. A grammar review is combined with the introduction of the remaining essential grammar topics. Readings are in the target language. More sophisticated writing is expected. Cultural topics are conveyed through the use of authentic resources such as magazines, videos, and internet resources. The course’s workload and material are more challenging and include additional material (vocabulary, grammar concepts) and advanced activities (unstructured dialogue, more in-depth readings) presented at an increased pace.

**ADDITIONAL ELECTIVES**

989  
Educational Cooperative Work Study Program (Co-op)  
11, 12  
1 Credit

Pre-Requisite: Counselor Recommendation is Required and Applicants Must Demonstrate Maturity and a Respect for Others

This course is especially recommended for students who plan to pursue a career in the teaching field. The program will provide students with the opportunity to learn and gain a better understanding of human differences and will foster and encourage friendships between students, both with and without disabilities. The co-op student will work with students who participate in the Life Skills Support, Autistic Support, or the Multiple Disabilities Support class. The program permits students to see teaching from the teacher’s perspective. Students’ jobs are determined on a daily basis by the cooperating teacher. These tasks vary greatly, depending on the needs of the teacher and the students but may include socialization, modeling, reinforcement of academic work, and participation in leisure activities. Students with a strong desire to help others will find this a rewarding course. It helps with the decision making process of whether or not the field of education as a good career choice.
Peer Tutoring - WH (year-long course) 11, 12 1 Credit
Prerequisite: Completion and Approval of Peer Tutoring Application Prior to Start of School Year. Applicants Must Have A Strong Academic Standing and Demonstrate a Maturity and Respect for Others.

Peer tutors have long been utilized in the school setting. These student helpers provide effective academic support to students who are not working at grade level, struggling with specific class content and concepts or just need additional support and encouragement to help them work successfully. Students interested in becoming a peer tutor are required to complete a peer tutor application and acquire teacher and/or counselor recommendations. They must be in good academic standing, have a strong desire to help others and possess the leadership, maturity and self-discipline necessary to be an effective tutor. Peer tutoring sessions would be held during selected class periods, selected lunch periods and at least one day after school.
SPECIAL PROGRAMS
VIRTUAL HIGH SCHOOL

938/939  VHS Virtual High School  11, 12  1 Credit
Prerequisite: Approval from Coordinator and Principal Required
Imagine classrooms without walls, where students are able to attend their classes 24 hours a day, seven days a week. Imagine a nearly limitless selection of courses that are innovative and technologically rich in the areas of core academics, technology, and language minorities. Imagine students working cooperatively online with others from a wide variety of ages, ethnicities, backgrounds, and geographic locations. What you are beginning to imagine is the reality of the Virtual High School. VHS is an opportunity for NAHS students to take over 150 elective courses available over the Internet. The student takes the course during the regular school day and reports to class regularly. The course is a normal class except the instructor is in a classroom in another participating VHS school. There are full and half year courses for students with strong personal initiative and solid academic interests. VHS includes AP, honors, and regular classes. The courses may only be taken as electives and cannot replace a regular course. Solid computer skills are necessary. The course catalogue is available at www.govhs.org.
*In order to register for a second VHS course, student must have a final grade of a “C” or better in their previous VHS course.

GIFTED EDUCATION

Prerequisite: District Screening and Gifted Individualized Education Program
The courses listed below are available to students who have been identified as mentally gifted. The Gifted Seminar program is designed to expand and build upon learning taking place within the Core Curricular areas. Students receive enrichment and goal support from the Teachers of the Gifted in order to meet their GIEP goals.

051  GIFTED SEMINAR I – WH (semester class)  9  .5 Credit
Students will work to develop higher-level & critical thinking skills, problem solving, and interpersonal skills through examination of key concepts within and across disciplines. Student-center discussion, Socratic questioning as well as areas focused on independent, in-depth, and self-directed study will be used to provide enrichment based on existing knowledge and the examination of real-life problems and issues. COURSE THEME/FOCUS: MY CHANGING WORLD

052  GIFTED SEMINAR II – WH (semester class)  10  .5 Credit
Students will work to develop higher-level & critical thinking skills, problem solving, and interpersonal skills through examination of key concepts within and across disciplines. Student-center discussion, Socratic questioning as well as areas focused on independent, in-depth, and self-directed study will be used to provide enrichment based on existing knowledge and the examination of real-life problems and issues. COURSE THEME/FOCUS: INVENTION AND INNOVATION

0521  GIFTED SEMINAR II - TECH – WH (semester class)  10  .5 Credit
Available to identified gifted students enrolled in CMTHS courses only. Students will work to develop higher-level & critical thinking skills, problem solving, and interpersonal skills through examination of key concepts within and across disciplines. Students enrolled in this program will work with the Teacher of the Gifted on a self-directed research project in an area of personal interest. The skills and expectations of this program are designed to reflect and incorporate presentation skills and experience-based research integral to the demonstration of proficiency on district and state academic standards.

053  GIFTED SEMINAR III – WH  11  1 Credit
Students will work to develop higher-level & critical thinking skills, problem solving, and interpersonal skills through examination of key concepts within and across disciplines. Student-center discussion, Socratic questioning as well as areas focused on independent, in-depth, and self-directed study will be used to provide enrichment based on existing knowledge and the examination of real-life problems and issues. COURSE THEME/FOCUS: THE INDIVIDUAL AND SOCIETY

0531  GIFTED SEMINAR III - Independent Study– WH  11  1 Credit
Students will work to develop higher-level & critical thinking skills, problem solving, and interpersonal skills through examination of key concepts within and across disciplines. Students enrolled in this program will work with the Teacher of the Gifted on a self-directed research project in an area of personal interest. The skills and expectations of this program are designed to reflect and incorporate presentation skills and experience-based research integral to the demonstration of proficiency on district and state academic standards.
054  GIFTED SEMINAR IV – WH  12  1 Credit
Students will work to develop higher-level & critical thinking skills, problem solving, and interpersonal skills through examination of key concepts within and across disciplines. Student-center discussion, Socratic questioning as well as areas focused on independent, in-depth, and self-directed study will be used to provide enrichment based on existing knowledge and the examination of real-life problems and issues. COURSE THEME/FOCUS: LEARN AND LIVE TO SERVE

0541  GIFTED SEMINAR IV - Independent Study – WH  12  1 Credit
Students will work to develop higher-level & critical thinking skills, problem solving, and interpersonal skills through examination of key concepts within and across disciplines. Students enrolled in this program will work with the Teacher of the Gifted on a self-directed research project in an area of personal interest. The skills and expectations of this program are designed to reflect and incorporate presentation skills and experience-based research integral to the demonstration of proficiency on district and state academic standards.

SPECIAL EDUCATION

The courses listed below are adapted from the same titled courses in the Core Curricular areas. Students will receive learning support from special education teachers in order to meet IEP goals while still addressing state standards and the general education Course of Study.

ENGLISH CLASSES with LEARNING SUPPORT:

The goal of these courses is to adapt content allowing access to grade level English curriculum and standards in order to improve student’s comprehension, listening, speaking, reading, and writing skills. The English I (Read 180) course will focus on the same skills, but using the Scholastic Read 180 program.

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<td>0015</td>
<td>English I (Read 180)</td>
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<tr>
<td>0015</td>
<td>English I</td>
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<td>English III</td>
<td>11</td>
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<tr>
<td>0045</td>
<td>English IV</td>
<td>12</td>
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MATHEMATICS CLASSES with LEARNING SUPPORT:

The goal of these courses is designed to allow access to grade level curriculum and standards by providing practice of mathematics skills through real world applications.

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<tr>
<td>2155</td>
<td>Algebra II</td>
<td>10</td>
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<tr>
<td>2205</td>
<td>Geometry</td>
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SCIENCE CLASSES with LEARNING SUPPORT:

The goal of these courses is to access grade level science curriculum in the areas of biology and chemistry, and to improve reading, thinking, and study skills.

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<td>3065</td>
<td>Chemistry</td>
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<td>3085</td>
<td>Earth-Space Science</td>
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SOCIAL STUDIES CLASSES with LEARNING SUPPORT:

The goal of these courses is to provide access to grade level social studies curriculum, to improve reading, thinking, and study skills, and to enable students to determine their place in our social, political, and economic world.

1025  World Cultures  9  1 Credit
1005  U.S. History I  10  1 Credit
1035  U.S. History II  11  1 Credit
1055  American Systems  12  1 Credit

ADDITIONAL COURSES – SCHEDULED IN COMBINATION WITH REGULAR COURSE SCHEDULE

981  Itinerant Transitional Support  9, 10, 11, 12  1 Credit
This class is designed to be individualized for students who have an Individual Education Program (IEP). This class provides support for students with social, communication, academic and transitional needs.

989  Cooperative Work Study Program (Co-op)  11, 12  Variable Credit
This course is designed for eligible students who have an Individual Education Program (IEP) and require an alternative to the traditional full-day academic course of study. Students obtain paid employment within the community and are monitored by the Transition Coordinator. U.S. Department of Labor guidelines for employment of youth are followed. The goal for students in the program is to learn job skills and graduate with skills for competitive employment.

990  Community Based Vocational Training (CBVT)  11, 12  Variable Credit
This course permits eligible students who have an Individual Education Program (IEP) the opportunity to participate in non-paid vocational training at a District approved community or school district worksite. Students participate in work training that can be up to a half day of participation.

993  Academic Success Center  9, 10, 11, 12  1 Credit
This course is designed for students who are eligible for special education programming and receive services and supports in the regular education environment. The Academic Success Center provides students with small group direct instruction, which focuses on targeted curricular content that requires repetition and guided practice above and beyond what is provided in the regular education classroom.

ENGLISH AS A SECOND LANGUAGE

0815  Beginning ESL I  9, 10, 11, 12  1 Credit
Prerequisite: Diagnostic Testing
This course provides English Language instruction designed around the WIDA ELP standards and is comprised of oral fluency practice, grammar and morphology instruction, academic language and vocabulary, reading, discussion, debate, research and writing. Literacy skills are taught using social and instructional language and the language of language arts, mathematics, science, and social studies. Each unit is assembled around the language domains of listening, speaking, reading, and writing. Students in this course will have a WIDA language level of 1.0-1.4. Students in this level will work out of textbook: Inside the USA Newcomer level and Edge Fundamentals volume 1.
Beginning ESL I
Prerequisite: Diagnostic Testing
This course provides English Language instruction designed around the WIDA ELP standards and is comprised of oral fluency practice, grammar and morphology instruction, academic language and vocabulary, reading, discussion, debate, research and writing. Literacy skills are taught using social and instructional language and the language of language arts, mathematics, science, and social studies. Each unit is assembled around the language domains of listening, speaking, reading, and writing. Students in this course will have a WIDA language level of 1.5-1.9. Students in this level will work out of textbook: Edge Fundamentals volumes 1 and 2.

Intermediate ESL I
Prerequisite: Diagnostic Testing
This course provides English Language instruction designed around the WIDA ELP standards and is comprised of oral fluency practice, grammar and morphology instruction, academic language and vocabulary, reading, discussion, debate, research and writing. Literacy skills are taught using social and instructional language and the language of language arts, mathematics, science, and social studies. Each unit is assembled around the language domains of listening, speaking, reading, and writing. Students in this course will have a WIDA language level of 2.0-2.4. Students in this course will work out of textbook: Edge A volume 1.

Intermediate ESL II
Prerequisite: Diagnostic Testing
This course provides English Language instruction designed around the WIDA ELP standards and is comprised of oral fluency practice, grammar and morphology instruction, academic language and vocabulary, reading, discussion, debate, research and writing. Literacy skills are taught using social and instructional language and the language of language arts, mathematics, science, and social studies. Each unit is assembled around the language domains of listening, speaking, reading, and writing. Students in this course will have a WIDA language level of 2.5-3.4. Students in this course will work out of textbook: Edge A volume 2.

Advanced ESL I
Prerequisite: Diagnostic Testing
This course provides English Language instruction designed around the WIDA ELP standards and is comprised of oral fluency practice, grammar and morphology instruction, academic language and vocabulary, reading, discussion, debate, research and writing. Literacy skills are taught using social and instructional language and the language of language arts, mathematics, science, and social studies. Each unit is assembled around the language domains of listening, speaking, reading, and writing. Students in this course will have a WIDA language level of 3.5-4.4. Students in this level will work out of textbook: Edge B volumes 1 and 2.

Advanced ESL II
Prerequisite: Diagnostic Testing
This course provides English Language instruction designed around the WIDA ELP standards and is comprised of oral fluency practice, grammar and morphology instruction, academic language and vocabulary, reading, discussion, debate, research and writing. Literacy skills are taught using social and instructional language and the language of language arts, mathematics, science, and social studies. Each unit is assembled around the language domains of listening, speaking, reading, and writing. Students in this course will have a language level of 4.5-4.9. Students in this course will work out of textbook: Edge C volumes 1 and 2.

Academic Resource Center I
Prerequisite: Diagnostic Testing
This course is open to Beginner and Intermediate students. The Academic Resource Center provides support for students working to improve English proficiency in all content areas in order to successfully navigate the rigor of academic classes and provides direct instruction in specific skill sets in a group setting.

Academic Resource Center II
Prerequisite: Diagnostic Testing
This course is open to Consultative and Advanced I & II students. The Academic Resource Center provides support for students working to improve English proficiency in all content areas in order to successfully navigate the rigor of academic classes and provides direct instruction in specific skill sets in a group setting.
ROOSEVELT CAMPUS

Students at the Roosevelt Campus of the Norristown Area High School will be afforded the opportunity to recover credits through an intensive scholastic program designed around a core academic curriculum. This program is individualized to address the academic and social needs of each student enabling them to graduate on time. By working hand-in-hand with families, the Roosevelt faculty and staff provides opportunities for the students to achieve academic success. Teachers use a differentiated approach to teaching, emphasizing multiple learning styles, where students are free to discover the lifelong process of learning and achievement. The Roosevelt campus affirms the premise that when given the opportunity all students can learn and succeed.
Shaping today’s students for tomorrow’s careers.

THE LEARNING ENVIRONMENT AND THE FACULTY
Central Montco Technical High School provides educational programs in cooperation with each member school district which will prepare students to pursue post-secondary career studies and/or obtain employment in a global economy. The educational programs are designed to provide students with the necessary knowledge, skills and attitudes that will enable them to become a contributing member of society in an ever-changing workforce.

From the first day's orientation to graduation, students learn a competency-based technical curriculum in a relaxed and supportive environment. Having completed a 20 million dollar renovation in 2008, Central Montco Technical High School is a modern facility with state-of-the-art equipment and technology.

At CMTHS, caring and professionally certified staff share their skills while challenging and mentoring their students. Many of the instructors have established high profiles in their fields of expertise prior to becoming teachers. Teachers serve as mentors and respond to individual needs as they extend their support and enthusiasm while preparing students for the future. Our students are able to obtain a variety of state and nationally recognized certifications and professional licenses.

Central Montco Technical High School’s Programs of Study

<table>
<thead>
<tr>
<th>Health &amp; Human Services Cluster</th>
<th>Grade Level Eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Program of Study</td>
<td></td>
</tr>
<tr>
<td>Allied Health Technology</td>
<td>11-12</td>
</tr>
<tr>
<td>(Honors Level Program)*</td>
<td></td>
</tr>
<tr>
<td>Cosmetology</td>
<td>10-12</td>
</tr>
<tr>
<td>Culinary Arts, Baking &amp;</td>
<td>10-12</td>
</tr>
<tr>
<td>Restaurant Practices</td>
<td></td>
</tr>
<tr>
<td>Early Childhood Education*</td>
<td>10-12</td>
</tr>
<tr>
<td>Health Occupations</td>
<td>10-12</td>
</tr>
<tr>
<td>Pre-Nursing*</td>
<td>11-12</td>
</tr>
<tr>
<td>Public Safety</td>
<td>10-12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Communications &amp; Computer Cluster</th>
<th>Grade Level Eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Program of Study</td>
<td></td>
</tr>
<tr>
<td>Commercial Art</td>
<td>10-12</td>
</tr>
<tr>
<td>Web Design \ Digital Media</td>
<td>10-12</td>
</tr>
<tr>
<td>Networking Technology*</td>
<td>10-12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Construction Cluster</th>
<th>Grade Level Eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Program of Study</td>
<td></td>
</tr>
<tr>
<td>Construction Technology</td>
<td>10-12</td>
</tr>
<tr>
<td>Landscape Design &amp; Construction</td>
<td>10-12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transportation Cluster</th>
<th>Grade Level Eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Program of Study</td>
<td></td>
</tr>
<tr>
<td>Automotive Technology</td>
<td>10-12</td>
</tr>
<tr>
<td>Collision Repair Technology</td>
<td>10-12</td>
</tr>
</tbody>
</table>

*Denotes Dual Enrollment/Credit opportunities at Montgomery County Community College (MCCC); subject to class size minimum. Program Charts: 🌟Identified as an occupation with a “bright outlook” that is expected to grow rapidly in the next several years.

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**ALLIED HEALTH TECHNOLOGY PROGRAM-HONORS PROGRAM**

**Course Description:** Allied Health Technology is an Honors weighted College Prep course designed for students who wish to pursue a career in the health care professions. This course is currently located at [the work-based site of] Mercy Suburban Hospital where students are supervised during clinical rotations in medical, surgical, support, administrative services and internships. This program is open to 11th and 12th grade students who meet the required prerequisites: minimum GPA of 3.0, Algebra I, Biology, and a commitment to take Algebra II and Chemistry, along with excellent attendance and discipline record. Students may have the opportunity of dual enrollment at Montgomery County Community College in Psychology.

**Course Content:** Students learn to plan, organize, interact with patients, assume responsibilities and develop critical thinking and problem solving skills. The curriculum is designed to facilitate communication, cognitive, social-emotional, and developmental skills necessary for an entry-level position in the health field and continued education on the post-secondary level.

Topics of study include:
- Legal and ethical standards in health care
- Communications
- Body systems in wellness and disease
- Health care delivery systems
- Safety and emergency systems
- Infection control
- Medical Terminology
- Principles of nutrition
- Current issues in health care
- Leadership through HOSA (Health Occupations Students of America)
- Seminar visitations to other hospitals/schools

**Clinical Rotations:**
Medical, Surgical, Support Services, Administrative, Internship/Preceptor

**State or National Certifications Available at CMTHS:**
- Pennsylvania & NOCTI Skills Certificate
- BLS for Healthcare Provider

**Articulation Agreement**

<table>
<thead>
<tr>
<th>College/Post-Secondary Institution</th>
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</tr>
</thead>
<tbody>
<tr>
<td>See <a href="http://www.collegetransfer.net">www.collegetransfer.net</a> for program specific articulations agreements.</td>
<td></td>
</tr>
</tbody>
</table>

**Related Occupations Projected Employment Outlook PA Median Wages**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Projected Employment Outlook</th>
<th>PA Median Wages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Assistants</td>
<td>Much Faster than Average</td>
<td>$28,800/year</td>
</tr>
<tr>
<td>Occupational Therapist Asst.</td>
<td>Much Faster than Average</td>
<td>$45,700/year</td>
</tr>
<tr>
<td>Pharmacist</td>
<td>Much Faster than Average</td>
<td>$110,400/year</td>
</tr>
<tr>
<td>Physical Therapist Assistants</td>
<td>Much Faster than Average</td>
<td>$43,000/year</td>
</tr>
<tr>
<td>Physician Assistants</td>
<td>Much Faster than Average</td>
<td>$82,800/year</td>
</tr>
<tr>
<td>Radiological Technologists</td>
<td>Faster than Average</td>
<td>$53,100/year</td>
</tr>
<tr>
<td>Registered Nurses</td>
<td>Faster than Average</td>
<td>$64,800/year</td>
</tr>
<tr>
<td>Surgical Assistants</td>
<td>Much Faster than Average</td>
<td>$41,200/year</td>
</tr>
</tbody>
</table>

**Equipment & Tools for CMTHS Allied Health Technology Program:**
- Light gray scrub shirt and black scrub pants ([www.cmths.org](http://www.cmths.org) quick link – uniforms): $40
- Optional fleece jacket is $30
- White leather shoes: $20
- Watch with a second hand
- FBI Fingerprint ($27.50), PA Criminal History ($8.00) and Child Abuse Clearances ($8.00): Total: $43.50
- Physical Exam, 2-Step Mantoux Test, & Hepatitis B Series, Flu shot
- Per Mercy Suburban Hospital rules-No visible tattoos or facial piercings. No artificial nails or long nails or polish.
COSMETOLOGY PROGRAM

Course Description: The Cosmetology course is a three (3) year program. In order for students to earn the required 1250 clock hours per the Cosmetology State Board of Cosmetology, students must be able to attend CMTHS Cosmetology program for three (3) years. The Pennsylvania State Board of Professional and Occupational Affairs mandates 50 hours in Professional Practices including bacteriology, disinfection, sanitation, professional attitude, business practices, Pennsylvania Cosmetology Law; 200 hours in Sciences; histology, trichology, chemistry, physiology, cosmetic dermatology, electricity and 1000 hours in Cosmetology Skills - Cognitive & Manipulative; shampooing and conditioning, hair shaping, hair styling, chemical texturizing, permanent waving, hair coloring, hair straightening, skin care, nail technology, temporary hair removal, scalp treatment, care of all hair types and textures and makeup. Each student may earn up to 2.5 hours per school day towards their Cosmetology hours. Good attendance habits are imperative in order to complete the 1250 clock hour Cosmetology program.

Course Content: The curriculum for the Cosmetology course consists of 1250 clock hours of theoretical instruction and practical skills covering practices constituting the art of Cosmetology. Such theoretical instruction and practical skills include:

- Orientation: History and Career Opportunities, Life Skills, Your Professional Image and Communicating for Success
- General Sciences: Infection Control: Principles and Practices, General Anatomy and Physiology, Skin Structure, Growth and Nutrition, Skin Diseases and Disorders, Nail Structure and Growth, Nail Diseases and Disorders,
- Properties of the Hair and Scalp, Basics of Chemistry, Basics of Electricity
- Hair Care: Principles of Hair Design, Scalp Care, Shampooing and Conditioning, Haircutting, Hairstyling, Braiding and Braid Extensions, Wigs and Hair Additions, Chemical Texture Services, Haircoloring
- Skin Care: Hair Removal, Facials, Facial Makeup
- Nail Care: Manicures, Pedicures, Nail Tips & Wraps, Monomer Liquid & Polymer Powder Nail Enhancements, UV Gels
- State Law: Pennsylvania State Board of Cosmetology Law

State or National Certifications Available at CMTHS:
- NOCTI Cosmetology Pennsylvania Skills Certificate
- Pennsylvania State Board of Cosmetology License

<table>
<thead>
<tr>
<th>Related Occupations</th>
<th>Projected Employment Outlook</th>
<th>PA Median Wages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color Specialist</td>
<td>Bright Outlook-Rapid Growth Expected</td>
<td>$23,200/year</td>
</tr>
<tr>
<td>Cosmetologist</td>
<td>Bright Outlook-Rapid Growth Expected</td>
<td>$23,200/year</td>
</tr>
<tr>
<td>Cosmetology Teacher</td>
<td>Average</td>
<td>$62,400/year</td>
</tr>
<tr>
<td>Esthetician</td>
<td>Bright Outlook -Faster than Average</td>
<td>$24,300/year</td>
</tr>
<tr>
<td>Nail Technician</td>
<td>Average</td>
<td>$18,900/year</td>
</tr>
<tr>
<td>Spa Manager</td>
<td>Bright Outlook -Average</td>
<td>$36,200/year</td>
</tr>
</tbody>
</table>

Equipment & Tools for CMTHS Cosmetology Program:
- Level 1: Cosmetology Kit (Required by PA State Board of Cosmetology): approximately $243
- Two new mannequins each year (2nd & 3rd year students): approximately $70
- Black smock ($35), black professional pants & black shoes ([www.cmths.org](http://www.cmths.org) quick link – uniforms):
- School supplies: three ring binder, notebook tabs & paper, flash drive, pencils, highlighters, index cards

Reciprocity of Clock Hours: If students are unable to successfully complete the required Cosmetology clock hours for the PA State Board of Cosmetology Licensing due to personal circumstances while attending CMTHS, students may be able to transfer their clock hours (subject to their cost/fees) to the following institutions:
- Professional Academy of Cosmetology
- Jean Madeline Aveda Institute
- Lansdale School of Cosmetology
- Please check with each school regarding their transfer policy. State Board Cosmetology license test is $110
**CULINARY ARTS, BAKING AND RESTAURANT PRACTICES PROGRAM**

**Course Description:** The Culinary Arts, Baking and Restaurant Practices program offers a cutting edge curriculum for all students interested in culinary arts, baking, service management and related fields to study in our brand new state of the art kitchen and restaurant. All students complete their first year of study in the Culinary Arts concentration. During their second and third years of study, students have the option to continue to concentrate in Culinary Arts & Restaurant Services or concentrate in Baking & Pastry Arts. Students have the opportunity to demonstrate skills at our in-house restaurant and catering program. **Students may have the opportunity of dual enrollment at Montgomery County Community College.**

**Course Content:** Students participate in a special classroom management system validated by the American Culinary Federation. Students get hands-on experience in:
- Safety and sanitation practices
- Cooking technique
- Pastries and baking
- Breakfast cookery
- Guest services and dining
- Production controls
- Meal planning and presentation, including buffet presentation

**State or National Certifications Available at CMTHS:**
- Pennsylvania & NOCTI Skills Certificate
- Servesafe Sanitation Certificate
- American Culinary Federation Certificate

**Articulation Agreement**

<table>
<thead>
<tr>
<th>College/Post-Secondary Institution</th>
<th>Type of Articulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culinary Arts - CIP Code: 12.0508</td>
<td>See [<a href="http://www.college">www.college</a> transfer.net](<a href="http://www.college">http://www.college</a> transfer.net) for program specific articulations agreements.</td>
</tr>
<tr>
<td>Baking &amp; Pastry Arts - CIP Code: 12.0501</td>
<td></td>
</tr>
</tbody>
</table>

**Related Occupations**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Projected Employment Outlook</th>
<th>PA Median Wages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baker</td>
<td>Slower than average</td>
<td>$24,900/year</td>
</tr>
<tr>
<td>Chefs &amp; Head Cooks</td>
<td>Slower than average</td>
<td>$40,300/year</td>
</tr>
<tr>
<td>Culinary Arts Instructor</td>
<td>Average</td>
<td>$53,200/year</td>
</tr>
<tr>
<td>Dieticians &amp; Nutritionists</td>
<td>Faster than average</td>
<td>$49,600/year</td>
</tr>
<tr>
<td>Food Prep. Supervisors</td>
<td>☀Average</td>
<td>$33,500/year</td>
</tr>
<tr>
<td>Food Science Technicians</td>
<td>Slower than average</td>
<td>$35,800/year</td>
</tr>
<tr>
<td>Waiters/Waitresses</td>
<td>Slower than average</td>
<td>$19,100/year</td>
</tr>
</tbody>
</table>

**Equipment & Tools for CMTHS Culinary Arts Program:**
- Chef coat, checkered pants, apron and hat available ([www.cmths.org](http://www.cmths.org) quick link – uniforms): $145
EARLY CHILDHOOD EDUCATION PROGRAM

Course Description: The Early Childhood Education program is designed for 10th, 11th and 12th grade 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 observe and interact in a variety of early childhood settings including elementary schools, child care centers, Head Start programs, and early intervention programs, as well as our own on-site preschool, “Little Hands.” Students may have the opportunity of dual enrollment at Montgomery County Community College.

Course Content: Along with classroom instruction, students will learn skills by preparing and presenting both individual and team projects appropriate for children ages infant through young school-age. Topics of study include:

Principles of Child Development:
- Health, safety and nutrition
- Observation and teaching skills
- Communication skills & team building skills
- Child care center management and organization
- PA State Licensing Laws-Office of Child Development and Early Learning

State or National Certifications Available at CMTHS:
- Pennsylvania & NOCTI Skills Certificate
- Child Development Associate (CDA Ready)
- First Aid & CPR

Articulation Agreement College/Post-Secondary Institution Type of Articulation
Early Childhood Education See www.collegetransfer.net for program specific articulations agreements.

CIP Code: 19.0708

Related Occupations Projected Employment Outlook PA Median Salary
Childcare Center Director Faster than average $42,000/year
Childcare Worker Faster than average $19,300/year
Elementary Teacher Average $58,300/year
Preschool Teacher Faster than average $24,800/year
Teacher's Assistant Average $23,700/year

Equipment & Tools for CMTHS Early Childhood Education Program:
- PA Criminal History and Child Abuse Clearances: $16
- Physical Exam & 1-Step Mantoux Test (Use your doctor or clinic)
Burgundy smock / jacket (www.cmths.org quick link – uniforms): $35/$70
**HEALTH OCCUPATIONS PROGRAM**

**Course Description:** The Health Occupations Program offers a core academic curriculum and skill-based competency tasks linked to careers in the health care industry. This program provides the knowledge base for Health Occupations careers, including the Certified Nurse’s Assistant curriculum, as well as preparing the student to enter the health care system as a competent assistant to the health professional. This program is a state certified course and allows the eligible student to become a Certified Nurse’s Aide or Medical Assistant.

**Course Content:** This program provides the student with the necessary cognitive skills including communication methods, anatomy and physiology, medical terminology and the skills necessary for assisting in the community health care facilities. Topics of study include:
- Anatomy and physiology
- Medical ethics
- Medical terminology
- Nursing skills
- Leadership & employment skills
- Clinical experience

**Clinical Experience:**
- Local healthcare agencies

**State or National Certifications Available at CMTHS:**
- Pennsylvania and NOCTI Skills Certificate
- Pennsylvania Certified Nursing Assistant
- First Aid & CPR

**Articulation Agreement**

<table>
<thead>
<tr>
<th>Health Occupations CIP Code: 51.0899</th>
<th>See [<a href="http://www.college">www.college</a> transferring.net](<a href="http://www.college">http://www.college</a> transferring.net) for program specific articulations agreements.</th>
</tr>
</thead>
</table>

**Related Occupations**

<table>
<thead>
<tr>
<th>Certification</th>
<th>Projected Employment Outlook</th>
<th>PA Median Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certified Nurse Aide</td>
<td>Faster than Average</td>
<td>$27,300/year</td>
</tr>
<tr>
<td>Medical Assistant</td>
<td>Much Faster than Average</td>
<td>$28,800/year</td>
</tr>
</tbody>
</table>

**Equipment & Tools for CMTHS Health Occupations Program:**
- Wine scrub shirt, black scrub pants ([www.cmths.org](http://www.cmths.org) quick link – uniforms): $40
- Optional fleece jacket is $30
- White leather shoes: $20
- Watch with a second hand
- PA Criminal History Clearance: $8
- Physical Exam, 2-Step Mantoux Test, & Hepatitis B Series
- Per healthcare facilities- No visible tattoos or facial piercings. No artificial nails or long nails with nail polish.
**PRE-NURSING PROGRAM**

**Course Description:** The Pre-Nursing Program is intended for the academic student who is interested in the field of nursing on a collegiate level and has a serious commitment to the nursing profession. This program is open to 11th and 12th grade students who meet the required prerequisites: minimum 2.5 GPA, Algebra I, Biology, and a commitment to take Algebra II and Chemistry along with excellent attendance and discipline record. **Students may have the opportunity of dual enrollment at Montgomery County Community College in Psychology.**

**Course Content:** The curriculum consists of the communication, cognitive, social-emotional and developmental skills necessary to obtain an entry level position in the health-care field. Continuing education on the post-secondary level is expected and re-enforced through the learning process. **Topics of study include:**
- Legal and ethical standards in health care
- Communications
- Body systems in wellness and disease
- Health care delivery systems
- Safety and emergency systems
- Infection control
- Medical Terminology
- Principles of nutrition
- Current issues in health care

**Clinical Rotations:** Einstein Medical Center Montgomery
- Cardiac, Med-Surg, Obstetrics, Surgical, Radiology

**State or National Certifications Available at CMTHS:**
- Pennsylvania & NOCTI Skills Certificate
- BLS for Healthcare Provider

**Articulation Agreement**

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Pre-Nursing Program</td>
<td>See <a href="http://www.collegetransfer.net">www.collegetransfer.net</a> for program specific articulations agreements.</td>
<td></td>
</tr>
</tbody>
</table>

**Related Occupations**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Projected Employment Outlook</th>
<th>PA Median Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Licensed Practical Nurse</td>
<td>Much faster than Average</td>
<td>$42,500/year</td>
</tr>
<tr>
<td>Medical Assistants</td>
<td>Much Faster than Average</td>
<td>$28,800/year</td>
</tr>
<tr>
<td>Registered Nurses</td>
<td>Faster than Average</td>
<td>$64,800/year</td>
</tr>
<tr>
<td>Respiratory Therapist</td>
<td>Faster than Average</td>
<td>$56,100/year</td>
</tr>
<tr>
<td>Surgical Assistant</td>
<td>Much faster than Average</td>
<td>$41,200/year</td>
</tr>
</tbody>
</table>

**Projected Employment Outlook**

- Licensed Practical Nurse: Much faster than Average
- Medical Assistants: Much Faster than Average
- Registered Nurses: Faster than Average
- Respiratory Therapist: Faster than Average
- Surgical Assistant: Much faster than Average

**Equipment & Tools for CMTHS Pre-Nursing Program:**
- Turquoise scrub shirt and black scrub pants ([www.cmths.org](http://www.cmths.org) quick links – uniforms): $40
- Optional fleece jacket is $30
- White leather shoes: $20
- Watch with a second hand
- Stethoscope: $25
- FBI Fingerprint ($27.50), PA Criminal History ($8.00) and Child Abuse Clearances ($8.00): Total: $43.50
- Physical Exam, 2-Step Mantoux Test, & Hepatitis B Series, Flu shot
- Per healthcare facilities- No visible tattoos or facial piercings. No artificial nails or long nails with nail polish.
## PUBLIC SAFETY PROGRAM

**Course Description:** The Public Safety Program is designed to prepare students to enter careers related to Law Enforcement, Emergency Medical Services, Fire Sciences, and Industrial Safety. The program is based at CMTHS with many of the learning experiences performed at off-campus locations such as the Montgomery County Fire Academy, local police departments and local businesses. Mastering of the competencies will be accomplished in supervised, simulated situations.

**Course Content:** Topics of study include:
- Emergency response & communications
- Criminal justice
- Criminal investigation & accident investigation, including evidence collection & photography
- Defensive tactics
- Essentials of firefighting & fire science
- Physical (20%) & mental fitness-Municipal Police Officers’ Education & Training Commission (MPOETC) Physical Fitness Standards

**Internship Programs:** Internships provide first-hand experiences in an occupation selected by the student while under the direct supervision of a mentor.

**State or National Certifications Available at CMTHS:**
- Pennsylvania and NOCTI Skills Certificate
- First Aid & CPR
- Law Enforcement Responder
- Defensive Tactics
- Firefighter Certification

### Articulation Agreement
<table>
<thead>
<tr>
<th>Articulation Agreement</th>
<th>College/Post-Secondary Institution</th>
<th>Type of Articulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Safety</td>
<td>See [<a href="http://www.college">www.college</a> transfer.net](<a href="http://www.college">http://www.college</a> transfer.net) for program specific articulations agreements.</td>
<td></td>
</tr>
</tbody>
</table>

### Related Occupations

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Projected Employment Outlook</th>
<th>PA Median Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrections Officer</td>
<td>Slower than Average</td>
<td>$47,100/year</td>
</tr>
<tr>
<td>Criminal Justice Teacher</td>
<td>Average</td>
<td>$68,300/year</td>
</tr>
<tr>
<td>Dispatcher</td>
<td>Average</td>
<td>$37,500/year</td>
</tr>
<tr>
<td>Emergency Medical Tech</td>
<td>✨Much Faster than Average</td>
<td>$30,200/year</td>
</tr>
<tr>
<td>Firefighter</td>
<td>Slower than Average</td>
<td>$47,200/year</td>
</tr>
<tr>
<td>Police Patrol Officer</td>
<td>Slower than Average</td>
<td>$59,800/year</td>
</tr>
<tr>
<td>Security Guard</td>
<td>✨Average</td>
<td>$23,200/year</td>
</tr>
</tbody>
</table>

### Equipment & Tools for CMTHS Public Safety Program:
- Standard police style shirt with epaulets worn with navy blue or black dress trousers ([www.cmths.org](http://www.cmths.org) quick link – uniforms): ($85)
- Physical training T-shirt with CMTHS logo ($15)
- Proper physical fitness attire-grey sweat suit, black T-shirt, and/or black shorts ($35)
- Belt, black shoes or boots
- Blood pressure cuff and stethoscope for emergency medical training – ($30)
- Large three ring binder & 8 GB USB drive

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**COMMUNICATIONS & COMPUTERS CLUSTER**

**VISUAL COMMUNICATIONS: WEB DESIGN/DIGITAL MEDIA PROGRAM**

**Course Description:** The Digital Media course encompasses graphic design, digital imaging and web site design. A sequence of courses, beginning with Foundations of Digital Design, will provide students with a structure that will serve to support personal and professional goals for enrichment and development.

**Course Content:** Topics of study include:
- Computer hardware and software- Adobe, Photoshop, Illustrator and InDesign, Flash, Final Cut Pro & Dreamweaver
- Digital imaging & photography
- Page layout & design
- Desktop publishing
- Video editing & Graphic & web page design

**State or National Certifications Available at CMTHS:**
- Pennsylvania and NOCTI Skills Certificate

<table>
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<tr>
<th>Articulation Agreement</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Digital Media CIP Code: 11.0801</td>
<td>See [<a href="http://www.college">www.college</a> transfer.net](<a href="http://www.college">http://www.college</a> transfer.net) for program specific articulations agreements.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Related Occupations</th>
<th>Projected Employment Outlook</th>
<th>PA Median Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Director</td>
<td>Slower than Average</td>
<td>$72,400/year</td>
</tr>
<tr>
<td>Film &amp; Video Editors</td>
<td>Little or No Change</td>
<td>$48,600/year</td>
</tr>
<tr>
<td>Graphic Designer</td>
<td>Slower than Average</td>
<td>$42,300/year</td>
</tr>
<tr>
<td>Multi Media Artists</td>
<td>Slower than Average</td>
<td>$55,300/year</td>
</tr>
<tr>
<td>Web Developer</td>
<td>Faster than Average</td>
<td>$58,900/year</td>
</tr>
</tbody>
</table>

**Equipment & Tools for CMTHS Digital Media Program:**
- Foundation year tool kit consisting of pencils, markers, a toolbox to hold supplies, a portfolio, a three ring binder, USB drive (16GB) for computer files, and work shirt ([www.cmths.org](http://www.cmths.org) quick link – uniforms): $60
# NETWORKING TECHNOLOGY PROGRAM

## Course Description:
The Networking Technology program is intended to meet the needs of the technology industry both now and in the future, and, with the Internet growing continually, there are many opportunities available to Networking Technology students. Students can earn CompTIA A+ Network+ certification, CISCO CCENT (CISCO Certified Entry Level Technician), as well as a CCNA (Certified Cisco Network Associate) certificate. With an education in infrastructure-level networking, students are highly sought-after by employers in all areas of business and education. Students may have the opportunity of dual enrollment at Montgomery County Community College.

## Course Content:
- Networking basics with CompTIA A+ & Network+ Program, routers and routing basics, switching basics and inter-network routing and WAN technologies
- Basic copper and fiber cable termination
- Cisco Networking Academy course work
- CCNA® - a comprehensive curriculum that includes four separate modules
- Proper care, maintenance, and use of networking software tools and equipment

## State or National Certifications Available at CMTHS:
- Pennsylvania and NOCTI Skills Certificate
- Certified Cisco Network Associate Certificate
- Cisco Certified Entry-level Network Technician (CCENT)
- CompTIA Network+ Certificate
- CompTIA A+ Certificate
- C-Tech Copper & Fiber Certification

## Articulation Agreement

<table>
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<tr>
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<tbody>
<tr>
<td>See <a href="http://www.collegetransfer.net">www.collegetransfer.net</a> for program specific articulations agreements.</td>
<td></td>
</tr>
</tbody>
</table>

## Related Occupations

<table>
<thead>
<tr>
<th>Related Occupations</th>
<th>Projected Employment Outlook</th>
<th>PA Median Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Administrator</td>
<td>Average</td>
<td>$72,600/year</td>
</tr>
<tr>
<td>Network Architect</td>
<td>Faster than Average</td>
<td>$95,600/year</td>
</tr>
<tr>
<td>Network Support Specialist</td>
<td>Slower than Average</td>
<td>$59,600/year</td>
</tr>
<tr>
<td>PC Support Specialist</td>
<td>Faster than Average</td>
<td>$43,600/year</td>
</tr>
<tr>
<td>Telecommunication Installer</td>
<td>Slower than Average</td>
<td>$59,600/year</td>
</tr>
</tbody>
</table>

## Equipment & Tools for CMTHS Networking Program:
- CMTHS Polo ($35) and optional fleece jacket ($35) at ([www.cmths.org](http://www.cmths.org) quick link – uniforms)
- USB Drive
CONSTRUCTION TECHNOLOGY PROGRAM

**Course Description:** The Construction Technology Program is an excellent option for students interested in a career related to residential and commercial construction. This program includes studies in Carpentry, Masonry, Electricity, Plumbing, and Building Maintenance.

**Course Content:** The first level is considered a foundation year. Students are taught hand and power tool safety as well as electrical safety, scaffold and ladder safety and fall protection. Residential wiring topics include various switching and receptacle installation and National Electrical Code requirements are covered. Carpentry topics utilize technical drawings to produce student made projects. Plumbing topics include PVC, copper and the installation and repair of various plumbing fixtures. Masonry topics in the first year include building block walls, corners and foundations.

The second level is a continuation of the first level. Students are taught blueprint reading and drawing and use those skills to draw a structure that they then build. This project includes installing sheetrock, taping and finishing, painting as well as wiring and copper water lines. Students learn to install 100 amp residential service, proper grounding techniques and power panel circuit breaker installation.

The third level is project based. Students work either in pairs or on their own. Using blueprints, students layout and build a foundation. A powder room or bathroom is framed. Electrical, tub, toilet, sink, sheetrock, windows, roofing, siding, painting, tile and a water heater is installed. Third level students use the skills obtained in the first and second levels to complete an entire structure. They are called upon as role models and often help other students in the shop; they learn to be leaders.

**State or National Certifications Available at CMTHS:**
- Pennsylvania and NOCTI Skills Certificate
- OSHA 10-hour Certification

<table>
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<tr>
<th>Articulation Agreement</th>
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</tr>
</thead>
</table>
| Building Trade/Property Maintenance  
CIP Code: 46.0401 | See [www.collegetransfer.net](http://www.collegetransfer.net) for program specific articulations agreements. | |

<table>
<thead>
<tr>
<th>Related Occupations</th>
<th>Projected Employment Outlook</th>
<th>PA Median Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carpenter</td>
<td>Much Faster than Average</td>
<td>$40,300/year</td>
</tr>
<tr>
<td>Cement Mason</td>
<td>Much Faster than Average</td>
<td>$44,000/year</td>
</tr>
<tr>
<td>Construction Manager</td>
<td>Faster than Average</td>
<td>$99,800/year</td>
</tr>
<tr>
<td>Electrician</td>
<td>Faster than Average</td>
<td>$50,100/year</td>
</tr>
<tr>
<td>HVAC</td>
<td>Faster than Average</td>
<td>$44,400/year</td>
</tr>
<tr>
<td>Plumber</td>
<td>Faster than Average</td>
<td>$50,400/year</td>
</tr>
</tbody>
</table>

**Equipment & Tools for CMTHS Construction Technology Program:**
- Black T-shirt purchased ([www.cmths.org](http://www.cmths.org) quick link – uniforms) $15, optional sweatshirt $25
- Leather work boots - $40
- Tool box, tool belt and various tools (approximate cost $250).
**LANDSCAPE DESIGN & CONSTRUCTION PROGRAM**

**Course Description:** The Landscape Design & Construction Program offers hands on learning and will prepare students in all phases of landscape/hardscape design and installation, horticulture, nursery operations, and turf management. With an emphasis on residential home installation, students will learn the proper use of hand and power tools, skid loaders, construction materials, measuring and estimating, blueprint and plan reading, and jobsite safety.

**Course Content:** Topics of Study include:
- Plant Identification
- Plant & Soil Science
- Pesticide Management
- Greenhouse/Nursery Production
- Arboriculture & floriculture
- Hardscape Design & Construction
- Bobcat Skid Steer Loader Operator Training Course certification

**State or National Certifications Available at CMTHS:**
- Pennsylvania and NOCTI Skills Certificate
- PA Pesticide Applicator Certification, PA Dept. of Agriculture
- PA Certified Horticulturist, PA Landscape & Nursery Certification
- ISA Certified Tree Worker/Climber Specialist, International Society of Arboriculture

<table>
<thead>
<tr>
<th>Articulation Agreement</th>
<th>College/Post-Secondary Institution</th>
<th>Type of Articulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landscape Design &amp; Construction</td>
<td>See <a href="http://www.collegetransfer.net">www.collegetransfer.net</a> for program specific articulations agreements.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Related Occupations</th>
<th>Projected Employment Outlook</th>
<th>PA Median Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landscapers &amp; Grounds</td>
<td>Average</td>
<td>$26,600/year</td>
</tr>
<tr>
<td>Supervisors-Landscapers</td>
<td>Average</td>
<td>$50,600/year</td>
</tr>
<tr>
<td>Landscape Architects</td>
<td>Average</td>
<td>$58,900/year</td>
</tr>
<tr>
<td>Nursery Workers</td>
<td>Bright Outlook</td>
<td>$22,600/year</td>
</tr>
<tr>
<td>Nursery/Greenhouse Manager</td>
<td>Bright Outlook</td>
<td>$86,500/year</td>
</tr>
</tbody>
</table>

**Equipment & Tools for CMTHS Landscape Design & Construction Program:**
- Fluorescent Yellow T-shirt purchased ([www.cmths.org](http://www.cmths.org) quick link – uniforms): $15, and optional sweatshirt $25
- Leather work boots - $40
# TRANSPORTATION CLUSTER

## AUTOMOTIVE TECHNOLOGY PROGRAM

**Course Description:** The Automotive Technology program introduces students to the Automotive Service Industry. The course focuses on developing the hands-on and intellectual skills required of an entry-level technician. This course is NATEF (National Automotive Technicians Education Foundation) certified. Students who meet the academic and employability skills qualifications may apply for the AYES (Automotive Youth Educational Systems) Program.

**Course Content:** Topics of study include:
- Tools/Fasteners
- Suspension and Steering, & Brakes
- Electrical and Electronics Systems
- Engine Repair and Engine Performance
- Vehicle Maintenance and Reconditioning
- Heating and Air Conditioning

**State or National Certifications Available at CMTHS:**
- Pennsylvania and NOCTI Skills Certificate
- Automotive Service Excellence (8 areas of certification)
- Freon Handler’s License
- ACDelco Certificates (5 areas of certification)
- SP/2 (Safety & Pollution 2) Certificate

**Articulation Agreement**

<table>
<thead>
<tr>
<th>Automotive Technology</th>
<th>College/Post-Secondary Institution</th>
<th>Type of Articulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIP Code: 47.0604</td>
<td>See <a href="http://www.collegetransfer.net">www.collegetransfer.net</a> for program specific articulations agreements.</td>
<td></td>
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</table>

**Related Occupations**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Projected Employment Outlook</th>
<th>PA Median Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Tech/Mechanic</td>
<td>Average</td>
<td>$35,300/year</td>
</tr>
<tr>
<td>Auto Parts Sales</td>
<td>Average</td>
<td>$30,700/year</td>
</tr>
<tr>
<td>Transportation Inspector</td>
<td>Average</td>
<td>$72,800/year</td>
</tr>
</tbody>
</table>

**Equipment & Tools for CMTHS Automotive Technology Program:**
- Dark blue T-shirt purchased at ([www.cmths.org](http://www.cmths.org) quick link – uniforms): $15, optional sweatshirt for $25
- Dark blue Dickies® pants - $25
- Leather work boots - $40
- Tool box, lock and tools (approximate cost $190.00)
## COLLISION REPAIR TECHNOLOGY PROGRAM

### Course Description:
Collision Repair Technicians are skilled workers who repair minor and major defects such as scratches, chips, dents, surface rust and rust outs. The technician also welds torn metal, replaces damaged parts, and estimates repairs. A person in this trade should have the desire to work with metal and finishing metals such as paints, solvents, and waxes. The program is A.S.E. (Automotive Service Excellence) and ICAR gold certified.

### Course Content:
I-Car Curriculum prepares students to remove excessively damaged fenders, panels and grills using wrenches and cutting tools and attaching or manufacturing replacements by bolting, gluing or MIG welding them in place. Other skills taught in this course include:

- Dent removal
- Body filling using plastic filler & fiberglass
- Grinding, sanding & applying base coat
- Applying clear coat paints using today’s newest technology

### State or National Certifications Available at CMTHS:
- Pennsylvania and NOCTI Skills Certificate
- I-CAR (14 modules/areas of certification)
- PPG online Training Refinishing Certificates (12 areas of certification)

### Articulation Agreement
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### Related Occupations

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<tr>
<th>Occupation</th>
<th>Projected Employment Outlook</th>
<th>PA Median Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Glass Installer</td>
<td>Average</td>
<td>$29,000/year</td>
</tr>
<tr>
<td>Autobody Technician</td>
<td>Average</td>
<td>$37,900/year</td>
</tr>
<tr>
<td>Insurance Adjuster</td>
<td>Slower than Average</td>
<td>$60,600/year</td>
</tr>
<tr>
<td>Painter-Transportation</td>
<td>Average</td>
<td>$45,000/year</td>
</tr>
</tbody>
</table>

### Equipment & Tools for CMTHS Collision Repair Program:
- T-shirt purchased ([www.cmths.org](http://www.cmths.org) quick link – uniforms): $15, optional sweatshirt for $25
- Dickies® pants (blue or tan) - $25
- Work boots or work shoes with leather tops - $40
# HEALTH & HUMAN SERVICES CLUSTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Duration</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS101</td>
<td>Health Assisting</td>
<td>Full year course</td>
<td>Topics of study include anatomy &amp; physiology, medical ethics, medical terminology, nursing skills, leadership &amp; employment skills, clinical experiences, CPR, and first aid.</td>
</tr>
<tr>
<td>CO101</td>
<td>Nail Tech</td>
<td>One Semester (AM or PM, Fall or Spring)</td>
<td>The PA NAIL TECHNICIAN LICENSE requires 200 hours of practice and study time. Students study: Bacteriology, Sterilization, Sanitation and Safety; Nail Structure, Composition, Disorders, and Diseases; Manicures, Artificial Nails, Pedicures, Nail Art. Students may be required to return for an additional semester to complete the 200 hours required for the exam, depending on number of absences.</td>
</tr>
</tbody>
</table>

# COMMUNICATIONS & COMPUTERS CLUSTER

<table>
<thead>
<tr>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT140</td>
<td>CompTIA A+ PC Hardware &amp; Software</td>
<td>One Semester (AM Fall)</td>
<td>The CompTIA A+ certification is the starting point for a career in IT. In order to receive the CompTIA A+ certification, the student must pass two exams.  CompTIA A+ 220-801 covers the fundamentals of computer technology, installation and configuration of PCs, laptops and related hardware, and basic networking.  CompTIA A+ 220-802 covers the skills required to install and configure PC operating systems, as well as configuring common features (e.g. network connectivity and email) for mobile operating systems Android and Apple iOS.</td>
</tr>
<tr>
<td>IT141</td>
<td>CompTIA Network+</td>
<td>One Semester (AM Spring)</td>
<td>The CompTIA Network+ certification is the sign of a qualified networking professional. One exam covers network technologies, installation and configuration, media and topologies, management, and security. Candidate job roles include network administrator, network technician, network installer, help desk technician and IT cable installer. Companies such as Dell, HP, Ricoh, Sharp and Xerox recommend or require CompTIA Network+ for their networking technicians.</td>
</tr>
<tr>
<td>IT142</td>
<td>Cisco Exploration 1</td>
<td>One Semester (PM Fall)</td>
<td>CCNA Exploration teaches networking based on technology, covering networking concepts using a top-down, theoretical, and integrated approach – from network applications to the network protocols and services provided to those applications by the lower layers of the network. Basic routing and switching configuration topics are introduced. Cisco Exploration 2 may be scheduled for the Spring PM semester to complete a yearlong schedule.</td>
</tr>
</tbody>
</table>
| VC100       | Advertising & Graphic Design               | One Semester (AM or PM, Spring or Fall) | The Creative Process, Design & Layout, Typography, Color Theory & Basic Drawing/Sketching. From basic type fonts to concepts in electronic publishing, students learn the art of visual communication. Apply communication theory, artistry and technical skills to answer the question "what makes an audience feel, think, or act in a specific way?"  

Software: Adobe Photoshop, Illustrator, InDesign |
| VC101       | Illustration                               | One Semester (AM or PM, Spring or Fall) | Students will study the Creative Process, Figure Drawing, Character Development, & Children's Book Illustration Techniques. Students study the vast possibilities inherent in mass media, computer technology, cartoons and comics; are exposed to techniques used in editorial and advertising production, and with using of a range of materials—from pencils, to inks, to the latest in computer imaging.  

Software: Adobe Photoshop & Adobe Illustrator |

# TRANSPORTATION CLUSTER

<table>
<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>AM101</td>
<td>Auto Mechanic – S/P2 Certification</td>
<td>One Semester (AM or PM, Fall Only)</td>
<td>The S/P2 training course covers safety and pollution prevention issues that are important to all automotive operations. Introductory auto mechanic concepts are taught and practiced.</td>
</tr>
<tr>
<td>CR100</td>
<td>Surface Prep (Intro Collision Repair)</td>
<td>One Semester (AM or PM, Fall Only)</td>
<td>This course teaches students to prepare surfaces, repair minor and major defects such as scratches, chips, dents, surface rust and rust outs. Surface prep is a fundamental skill for collision repair technicians and key to a great paint job.</td>
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</tbody>
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**FLEX COURSES**

<table>
<thead>
<tr>
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<th>Duration</th>
<th>Description</th>
</tr>
</thead>
</table>
SPECIAL SERVICES

SCHOLARSHIPS
In order to address our philosophy of encouraging all students to be prepared for "lifelong learning," the Central Montco Technical High School has allocated in excess of $800,000 in financial aid to graduating seniors. Through this competitive privately funded program, seniors have been able to attend a wide variety of post-secondary schools. Preparation for a scholarship commences with the first day at CMTHS and culminates with the formal application for a scholarship, made in January of the senior year.

STUDENT ASSISTANCE CENTER
The purpose of the Student Assistance Center is to enhance student achievement by providing a variety of support services. These services are available to any student who is experiencing some difficulty or impediment to learning.

SUPPORT SERVICES
CMTHS provides supplementary assistance to our students who are enrolled in an approved technical program. Career evaluation, instructional counseling and placement are provided. These evaluation services are designed to provide the student with the necessary information to make a more informed career choice. An assessment counselor is also present to interpret the career interest and aptitude information about the student, and help them maximize the educational value of their chosen career or technical program. Career related math and reading instruction are also provided through Perkins funding. The academic instructional staff includes a certified math teacher and reading specialist. The math and reading programs are designed to address the needs of students in their chosen technical area and provide assistance with home school assignments.

WORK-BASED STUDIES
How do you get experience in your chosen field while still in school? At Central Montco Technical High School, Work-Based Studies (WBS) connects classroom learning with work-based experience and teams employers, educators, community leaders, students and parents.

The Work-Based Studies Experiences at CMTHS include:

Clinical Experiences: Non-paid, work-based experiences in hospitals, long term care facilities and day care centers.

Cooperative Education: Program related placements that are paid, on-the-job training positions and are considered an extension of the classroom. The timeline for placement is individualized and based on student need. Students are trained under the direct supervision of the employer and are assigned a mentor. Students’ progress is monitored and evaluated by the school and the employer on a continual basis.

Internships: Paid and non-paid work-based experiences for a specified length of time.

STUDENT ORGANIZATIONS

SKILLSUSA & HEALTH OCCUPATIONS STUDENTS OF AMERICA (HOSA)
SkillsUSA and Health Occupations Students of America (HOSA) have chapters at Central Montco Technical High School. These programs are nationally recognized organizations in which all students participate. SkillsUSA is a national partnership of students, teachers and industry working together to ensure America has a skilled work force through leadership training and student government.

COUNCIL OF PRESIDENTS
Council of Presidents is established for each session with representation from all program areas. Meetings are held on a monthly basis with the primary goal of functioning as a student government.
NATIONAL TECHNICAL HONOR SOCIETY
The National Technical Honor Society is the acknowledged leader in the recognition of outstanding student achievement in career and technical education. Over 2000 schools and colleges throughout the U.S. and its territories are affiliated with the Society. Member schools agree that NTHS encourages higher scholastic achievement, cultivates a desire for personal excellence, and helps top students find success in today’s highly competitive workplace.

ADMISSIONS PROCESS

APPLYING FOR ADMISSION

Admission to Central Montco Technical High School is based upon the recommendation of home school teachers and guidance counselors and/or IEP team. An application with a copy of the IEP if applicable is required before enrollment. The school enrolls students who thrive in a competitive environment. If you seek a learning environment where academics and applications are taught in tandem, are hardworking and highly motivated, you should consider CMTHS. Through careful scheduling with home school guidance counselors, students are able to meet most college entrance requirements and attend CMTHS. We encourage all students and parents to visit our school and meet with the CMTHS Guidance Counselor in order to select the most appropriate program and schedule of academic classes. Although our programs are developed around a three-year curriculum, you may enter CMTHS in 10\textsuperscript{th}, 11\textsuperscript{th} or 12\textsuperscript{th} grade.

CMTHS Registration forms are available at your home school guidance office and at Central Montco Technical High School’s website (www.cmths.org).

EQUITY STATEMENT

Central Montco Technical High School's Equity Statement

Central Montco Technical High School does not discriminate in its education programs, activities or employment practices based on sex, color, national origin, race, sexual orientation, disability, age, religion, ancestry, political opinions or affiliations, or lawful activity in any employee organization. Central Montco Technical High School provides equal access to the Boy Scouts and other designated youth groups. For information about your civil right and grievance procedures, contact Maranda Kapish, Equal Rights Coordinator, (610) 277-2301.

La Escuela Secundaria Técnica Montco Central no discrimina en sus programas de educación, actividades o prácticas de empleo basadas en sexo, origen en color, nacional, raza, orientación sexual, discapacidad, edad, religión, ascendencia, opiniones políticas o afiliaciones, o actividad legal en ninguna organización de empleado. La Escuela Secundaria Técnica Montco Central ofrece un acceso equitativo a los Boy Scouts y otros grupos juveniles designados. Para obtener información acerca de su derecho civil y de los procedimientos para quejas, comuníquese Maranda Kapish, Coordinadora de Igualdad de Derechos, (610) 277-2301.

DISCLAIMER

Articulation agreements between the PA Bureau of Career and Technical Education and education institutions are subject to change as they are continuously updated.
The Norristown Area School District does not discriminate in employment or educational programs, services or activities, based on race, color, national origin, sex, handicap, or age in accordance with State and Federal laws including Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, Title VI of the Civil Rights Act of 1964, the Age Discrimination Act of 1975, and the Americans with Disabilities Act. Inquiries or complaints should be directed to the Director of Human Resources, Norristown Area School District, 401 N. Whitehall Road, Norristown PA 19403, (610) 630-5000.