Equal Rights and Opportunities/Non-Discrimination Policy Statement

The Cocalico School District is an equal opportunity education institution and in compliance with the requirements of the Title VI, Title IX, Section 504, and the Americans with Disabilities Act (A.D.A.), will not discriminate of the basis of race, color, religion, national origin, sex, disability or handicap in its activities, programs or employment practices.

For more information regarding civil rights or grievance procedures, contact Dr. Ella Musser, Cocalico School District, South Fourth Street, Denver, PA 17517.

For information regarding services, activities, and facilities that are accessible to and usable by persons with disability, contact Dr. Ella Musser at 717-336-1417.

Students with Disabilities

In compliance with state and federal law, notice is hereby given by the Cocalico School District that it conducts on-going identification activities as a part of its school program for the purpose of identifying students who may be in need of special education and related services (eligible students). If you child is identified by the District as possibly in need of such services, you will be notified of applicable procedures. Individualized services and programs are available for children who are determined to need specially designed instruction due to the following conditions:

1. Autism/Pervasive Developmental Disorder (PDD)
2. Deaf - Blindness
3. Development Delay (Early Intervention Program only)
4. Emotional Disturbance (ED)
5. Hearing Impairment, including Deafness
6. Intellectually Disabled
7. Multiple Disabilities
8. Other Health Impairments (OHI)
9. Orthopedic Impairment
10. Specific Learning Disability (SLD)
11. Speech and Language Impairment
12. Traumatic Brain Injury
13. Vision Impairment, including Blindness

For further information on the rights of parents and children, provisions of services, evaluation and screening processes, and rights to due process procedures, you may contact the Director of Special Education at 717-336-1461.

Community Partnership Information

The Cocalico Community Partnership was formed in 1993 to improve the health, stability and emotional well-being of persons who live or work in the Cocalico area. The goals of the partnership are to: provide educational resources and programs to the Cocalico community; increase community awareness of existing service organizations; and serve as the Cocalico School District’s Community Drug, Alcohol and Mental Health Advisory Board. The Partnership’s Advisory Board meets monthly on the third Friday at 11:00 a.m. in the School District Staff Development Room. For further information call: Cocalico Community Partnership at 717-336-1417 or write: P. O. Box 800, Denver, PA 17517.
This Educational Planning Guide is intended to provide students and their parents with information about the educational program, graduation requirements, and courses of study at Cocalico High School. Planning your program for four years of high school requires self-appraisal with regard to your capabilities, interests, and goals. A familiarity with the various courses of study and a knowledge of the required courses are needed for sufficient progression in the educational process.

Serious consideration should be given to your selection of courses which will be consistent with your chosen pathway, aptitudes, interests, abilities, and post-high school plans. Cocalico High School will make a serious attempt to schedule you for all of the courses you desire. Please note that in some cases enrollment changes and staffing needs may dictate the cancellation of certain elective courses and advanced courses. It is, therefore, important to consider alternate options when planning your selection of courses. Students and parents are invited to consult with teachers and counselors for assistance in planning their program. Parents may make appointments with counselors by calling 717-336-1427 or 717-336-1442.

Chris Irvine .........................................................High School Principal
Anthony DiMatteo .............................................High School Assistant Principal
Scott Bennetche ................................................High School Assistant Principal
Whitney Seltzer ..................................................High School Assistant Principal/Athletic Director
Brad Testa ..............................................................Middle School Principal
Susan Snyder ........................................................Middle School Assistant Principal
Shawn Clicquennoi ..............................................Counselor - Grades 9-12 (A-Ha)
Drew J. Shimko .................................................Counselor - Grades 9-12 (Hb-O)
Krystal Waltman ..................................................Counselor - Grades 9-12 (P-Z)
Stacey Sola .............................................................Middle School Counselor
Katie Schaefer .....................................................Middle School Counselor
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* NCAA-Approved Course
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2 - Course Summary by Department
## Course Summary

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<tr>
<td><strong>SOCIAL STUDIES/CITIZENSHIP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*American Studies</td>
<td>702</td>
<td>1</td>
<td>4</td>
<td>55</td>
</tr>
<tr>
<td>*World Studies</td>
<td>703</td>
<td>1</td>
<td>4</td>
<td>55</td>
</tr>
<tr>
<td>*AP United States History</td>
<td>706</td>
<td>1</td>
<td>6</td>
<td>55</td>
</tr>
<tr>
<td>*Civics &amp; Government</td>
<td>710</td>
<td>1</td>
<td>4</td>
<td>56</td>
</tr>
<tr>
<td>*Psychology</td>
<td>720</td>
<td>1</td>
<td>5</td>
<td>56</td>
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<tr>
<td>*Sociology</td>
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<td>1</td>
<td>5</td>
<td>56</td>
</tr>
<tr>
<td>*Military History</td>
<td>715</td>
<td>1</td>
<td>5</td>
<td>56</td>
</tr>
<tr>
<td>*Current Events &amp; Mod. Hist.</td>
<td>728</td>
<td>1</td>
<td>5</td>
<td>57</td>
</tr>
<tr>
<td>Local Studies</td>
<td>729</td>
<td>1</td>
<td>5</td>
<td>57</td>
</tr>
<tr>
<td>*AP European History</td>
<td>730</td>
<td>1</td>
<td>6</td>
<td>57</td>
</tr>
<tr>
<td><strong>TECHNOLOGY EDUCATION</strong></td>
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</tr>
<tr>
<td>Wood Technology I</td>
<td>522</td>
<td>1</td>
<td>4</td>
<td>58</td>
</tr>
<tr>
<td>Electricity/Electronics I</td>
<td>525</td>
<td>1</td>
<td>4</td>
<td>58</td>
</tr>
<tr>
<td>Electricity/Electronics II</td>
<td>545</td>
<td>1</td>
<td>5</td>
<td>58</td>
</tr>
<tr>
<td>Visual Communications I</td>
<td>526</td>
<td>1</td>
<td>4</td>
<td>59</td>
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<tr>
<td>Visual Communications II</td>
<td>549</td>
<td>1</td>
<td>4</td>
<td>59</td>
</tr>
<tr>
<td>Energy, Power &amp; Transportation</td>
<td>523</td>
<td>1</td>
<td>4</td>
<td>59</td>
</tr>
<tr>
<td>Engineering &amp; Design Drafting</td>
<td>529</td>
<td>1</td>
<td>4</td>
<td>60</td>
</tr>
<tr>
<td>Architectural Drafting</td>
<td>530</td>
<td>1</td>
<td>4</td>
<td>60</td>
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<tr>
<td>Manufacturing</td>
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<td>1</td>
<td>4</td>
<td>60</td>
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<tr>
<td>TV Production I</td>
<td>538</td>
<td>1</td>
<td>4</td>
<td>61</td>
</tr>
<tr>
<td>TV Production II</td>
<td>541</td>
<td>1</td>
<td>4</td>
<td>61</td>
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<tr>
<td>TV Production III</td>
<td>546</td>
<td>1</td>
<td>5</td>
<td>61</td>
</tr>
<tr>
<td>TV Production IV</td>
<td>547</td>
<td>1</td>
<td>5</td>
<td>62</td>
</tr>
<tr>
<td>Introduction to Engineering</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Design</td>
<td>535</td>
<td>1</td>
<td>5</td>
<td>62</td>
</tr>
<tr>
<td>Principles of Engineering</td>
<td>559</td>
<td>1</td>
<td>5</td>
<td>62</td>
</tr>
<tr>
<td>Digital Photography</td>
<td>548</td>
<td>1</td>
<td>4</td>
<td>62</td>
</tr>
<tr>
<td>Hands-on Engineering</td>
<td>536</td>
<td>1</td>
<td>4</td>
<td>63</td>
</tr>
<tr>
<td>Yearbook Production I</td>
<td>044</td>
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<td>5</td>
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</tr>
<tr>
<td>Yearbook Production II</td>
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<td>63</td>
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<td>Yearbook Production III</td>
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<td>047</td>
<td>1</td>
<td>5</td>
<td>64</td>
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<td><strong>WORLD LANGUAGE</strong></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>*Spanish I</td>
<td>301</td>
<td>1</td>
<td>5</td>
<td>65</td>
</tr>
<tr>
<td>*Spanish II</td>
<td>302</td>
<td>1</td>
<td>5</td>
<td>65</td>
</tr>
<tr>
<td>*Spanish III</td>
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<td>1</td>
<td>5</td>
<td>66</td>
</tr>
<tr>
<td>*Spanish IV</td>
<td>304</td>
<td>1</td>
<td>5</td>
<td>66</td>
</tr>
<tr>
<td>*AP Spanish Lang &amp; Culture</td>
<td>316</td>
<td>1</td>
<td>6</td>
<td>66</td>
</tr>
<tr>
<td>*German I</td>
<td>305</td>
<td>1</td>
<td>5</td>
<td>67</td>
</tr>
<tr>
<td>*German II</td>
<td>306</td>
<td>1</td>
<td>5</td>
<td>67</td>
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<tr>
<td>*German III</td>
<td>307</td>
<td>1</td>
<td>5</td>
<td>67</td>
</tr>
<tr>
<td>*German IV</td>
<td>308</td>
<td>1</td>
<td>5</td>
<td>68</td>
</tr>
<tr>
<td><strong>CAREER &amp; TECHNOLOGY CENTER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brownstown</td>
<td>7</td>
<td>4</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>Mt. Joy</td>
<td>7</td>
<td>4</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>Willow Street</td>
<td>7</td>
<td>4</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>CTC Cluster Programs</td>
<td>2</td>
<td>4</td>
<td>79</td>
<td></td>
</tr>
</tbody>
</table>

*NCAA-Approved Course
*K - Keystone Course

Course Summary by Department - 3
Career Pathways are a way of grouping careers with common features and skills. Careers grouped into the same pathway typically require similar education and training. Exploring pathways can be a useful way to find a good career match, especially if you have general areas of interest but are not sure what specific careers match those interests. Career pathways can also help you better understand how your coursework in school can prepare you for certain types of careers.

School counselors and students use a system called Naviance to investigate Career Pathways. All students have accounts for this system. Please visit the Counseling page on our website to access Naviance. Each student will also have individual counseling meetings with their counselor for career planning and scheduling.

Included in the Educational Planning Guide are the icons for each pathway to help students and parents in selecting courses that pertain to career interests.

**Arts and Communications**
Designed to develop students’ awareness, interpretation, application, and production of visual, verbal, and written work. Careers in this pathway are linked to the humanities and include performing, visual, and literary arts as well as the communication media. Some occupations include those in creative writing, dance, editing, film, fine arts, graphic arts, journalism, modeling, music, photography, radio, telecommunications, theatre, and translating.

**Business/Information Management and Marketing**
Designed to prepare students for careers in the world of business, finance, and information services. Careers in this pathway are in the fields of business and marketing. Some occupations include those in accounting, administrative support staff, advertising, computer science, distribution, finance, insurance, international business, management, marketing research, merchandising, personnel, purchasing, real estate, sales and tourism.

**Engineering/Industrial and Technological Sciences**
Designed to develop students’ interests, awareness, and application to areas related to technologies necessary for design, development, installation, and maintenance of physical systems. Careers in this pathway are related to engineering, science, technology, construction, manufacturing, and transportation. Some occupations include airline pilots, archeologists, architects, assemblers, carpenters, drafters, engineers of all types, machinists, mechanics, scientists, tool and die makers, and truck drivers.
Health and Natural Resource Sciences
Designed to develop students interests in the life, physical and behavioral sciences. In addition, the planning, managing and providing of therapeutic services, diagnostic services, health information and biochemistry research development. Careers in this pathway are part of the health services field. They include occupations in hospital services, medical technology, medicine, nursing, optometry, pharmacy, psychiatry, psychology, therapy and others. Careers in this pathway are related to the environment and natural resources and include occupations in agribusiness, agriculture, animal science, veterinarian, forestry, horticulture, and wildlife management.

Human and Family Services
Designed to develop students interests, skills, and experiences for employment in careers related to familiar and human needs. Careers in this pathway are linked to family/consumer, economic, political and social systems. Some occupations in this career focus area include those in hospitality and recreation, public and community service, and the broad field of social services. Careers such as those in childcare, cosmetology, economics, education, fire protection, food service, government, history, hotel and restaurant services, law, law enforcement, the military, and recreation may be found in this career pathway.
I. Credit Requirements for Graduation

As specified in Cocalico School District’s Comprehensive Plan students must demonstrate achievement of all state-required standards. All students will demonstrate achievement of these standards through the successful completion of high school credits.

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications and</td>
<td>4</td>
</tr>
<tr>
<td>Literature Mathematics</td>
<td>4¹</td>
</tr>
<tr>
<td>Science</td>
<td>4¹</td>
</tr>
<tr>
<td>Social Studies/Citizenship</td>
<td>3</td>
</tr>
<tr>
<td>World Language</td>
<td>1²</td>
</tr>
<tr>
<td>Grade 9 P.E./Music</td>
<td>1</td>
</tr>
<tr>
<td>Grade 10 P.E./Health</td>
<td>1</td>
</tr>
<tr>
<td>Grade 11 P.E./Health</td>
<td>1</td>
</tr>
<tr>
<td>Senior Elective Options</td>
<td>1</td>
</tr>
<tr>
<td>Personal Finance/Survival</td>
<td>1</td>
</tr>
<tr>
<td>Skills Electives</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>28</strong></td>
</tr>
</tbody>
</table>

II. Keystone Exams

The Keystone Exams have replaced the 11th grade Pennsylvania System of School Assessment (PSSA) tests in mathematics, reading, and science for purposes of satisfying the Every Student Succeeds Act. Keystone Exams are end-of-course assessments designed to evaluate proficiency in academic content. House Bill 178, which was recently passed into law, includes a change to the School Code that makes proficiency on the Keystone Exams a graduation requirement for the class of 2020. (The requirement was previously applicable to the graduating class of 2019.) All students will be offered multiple opportunities to take the Keystone Exams throughout their high school careers. Remediation will be put in place for students not showing proficiency after taking the exams.

¹ - Full-time Career and Technology Center (CTC) students need only three credits of Mathematics and Science at CHS for graduation.

² - Students enrolled in Literacy Enrichment will be exempt from this requirement.
III. Senior Elective Option

Seniors will choose from 5 half-credit options in order to fulfill their one credit senior elective. Seniors are required to select two of the following options:

1) Physical Education 12*
2) Service Learning*
3) Financial Literacy*
4) Online Course**
5) Life-long Personal Communication Skills*

* See course descriptions in the Educational Planning Guide.
** See guidance counselors for online course selections and descriptions.

IV. Advanced Placement (AP) Courses

Cocalico High School (CHS) offers the following Advanced Placement (AP) courses: Language and Composition, Literature and Composition, Biology, Chemistry, Physics, Calculus AB, Calculus BC, Statistics, Microeconomics, United States History, Spanish Language and Culture and European History. See the appropriate section of this booklet for course descriptions.

The AP program provides high school students with an opportunity to achieve college credit while in high school. This program is a cooperative educational venture between the College Board and CHS. It is based on the fact that many young people can complete college-level studies in their secondary schools, and it represents a desire of schools and colleges to foster such experiences.

AP serves three groups: (1) students who wish to pursue college-level studies while still in secondary school, (2) schools that desire to offer these students the opportunity to do so, (3) colleges that wish to encourage and recognize such achievement. It does this by providing practical course outlines of college-level courses to interested high schools and student results of examinations based on these courses to the colleges of the student’s choice.

Participating colleges, in turn, grant credit and/or appropriate placement to students who have done well on the examinations. Thus, the AP program is an instrument of cooperation that extends the educational opportunities available to students by effectively relating college-level courses at thousands of schools to appropriate credit and placement at the colleges that the students eventually attend.

The AP examinations are offered throughout the world each May. No examination is longer than three hours; some are shorter. Examinations are administered at participating schools. Students will receive a grade and credit for each AP course completed. To receive college credit, a satisfactory score must be achieved on the AP examination and accepted by the student’s college. Students enrolled in an AP course are expected to take the AP examination.

V. Alternate Opportunities

A. Dual Enrollment
   Students interested in taking college level courses should contact their counselor for available opportunities. There are limited options, so students need to initiate the process prior to their senior year.

B. Work Experience
   This program is for seniors only. No credit will be awarded for this program. Students are still required to meet the graduation requirements that have been established for their class. Students must submit a copy of their weekly or biweekly pay stubs to the counseling office.
C. Cocalico Honors Internship
This program is a career exploration and training program for seniors only that is established as a partnership between Cocalico High School, local businesses/industries and the students of Cocalico High School. The main focus of the program is to support students in identifying careers of interest and working with local employers to establish training plans for the students to learn more about their career interests in a hands-on approach to learning. Student internships will require that students work a minimum of 120 hours per semester.

D. Online Learning - Cocalico Connections
A variety of core and elective online courses are available to students through the Cocalico Connections program. Students who are interested in online learning options should discuss their educational goals with their counselor. If online courses seem to be the best approach to meeting those goals, the following steps will be implemented before final determination is made regarding enrollment in online courses or a full-time online program:

1. Students will complete an inventory assessing their readiness to be online learners.
2. Students, parents, and counselors will meet to discuss the differences between online learning and the traditional classroom setting.
3. Administrative approval must be obtained.

Three online options are available to students:

1. Full-time Online Offsite- students complete all courses online at home.
2. Full-time Online Onsite- students complete all courses online in the school's online learning lab.
3. Hybrid Online- students take a mixture of online and traditional classes. Online courses can be taken at home or in the school's online learning lab, depending on student needs and access to transportation.

Students in an online course will be expected to meet the requirements of the course at the specified due dates. Grading and credits will be awarded according to the same guidelines that apply to the traditional program. Students who are full-time online students will also have the same expectations for course completion and credit requirements as in the traditional program. Additional information regarding online learning may be obtained in the counseling office at CHS. More information can also be obtained by visiting our online website. A link for the Cocalico Connections website can be found on the high school's homepage.

VI. Exceptions to Planned Course Selection
The following exceptions apply to online/correspondence courses, dual enrollment, and options for testing out of a course.

1. Students must obtain administrative approval prior to enrolling in any correspondence course or online course.
2. Correspondence courses or online courses may be used for credit recovery when a student fails a course during the school year.
3. Correspondence courses or online courses may be used to attain the credits necessary for early graduation with prior administrative approval.
4. Additional correspondence or online courses (beyond the full high school load of 4 credits per semester) may be taken for the purpose of enrichment. In this instance, the course is in addition to those required for graduation, not in place of a required class. The course will be noted on the student's transcript; however, it will not count toward a student's class rank or grade point average.
5. Dual enrollment classes will be taken in place of another course. In this case, college classes will count as high school classes with credit and for a grade. This option is available for seniors only, based on the agreement we have with participating colleges.
6. If the student is already carrying a full load at the high school (4 credits per semester), any college courses should be used for the purpose of enrichment. In this instance, the course is in addition to those required for graduation, not in place of a required class. The class will be noted on the student's transcript; however, it will not count toward a student's class rank or grade point average.
7. Students requesting to opt out of a required or prerequisite course must demonstrate solid mastery of the content of the course prior to the start of the course in order to be considered for approval for opting out. A score of Advanced on a Keystone final (if it is a Keystone course) or performance of 90% or higher on local assessments will be required. Other factors may also be considered, and final approval is at the discretion of the high school principal. In the rare instances that testing out is approved, a course may be listed on the student’s transcript; however, no credit will be awarded for the course. It should be clearly noted on the transcript that the student tested out of the program. Parents and students must be aware of the details related to testing out and they must both sign a consent form.

VII. Summer School Options for Credit Recovery

CHS offers on-line summer school courses which are interactive, highly engaging, and provide feedback to students as they work through course materials. Students meet with a Cocalico teacher at the onset of the course and then are required to attend two sessions per week in the high school. Exams are taken with the teacher. The cost to each student is $175 per course. Additional information may be obtained in the counseling office at the high school.

VIII. Instructions and Procedures for Completing Course Selection Forms

1. Become thoroughly familiar with the information about the courses available. Pay special attention to the pathway and recommended career cluster(s) appropriate for each course.

2. Study the graduation requirements for your class and make sure all required courses are included in your course selection. It is your responsibility to read the information and be informed.

3. As you consider which courses best meet your needs and interests, keep in mind the following factors:
   - Your past school records
   - Your abilities and aptitudes
   - Your plans following high school graduation

4. Check with present or past teachers, available teachers at parents’ night, or your school counselor for information about classes you are selecting.

5. During the scheduling conference with your counselor, you will complete the student request form which will be signed by your parents and returned to your counselor.

6. Be certain the courses you select are the ones you want to follow since these choices become finalized and sent to you in the August mailing. Dropping courses will be permitted only with administrator/counselor approval.

7. Every effort will be made to schedule your choice of subjects. In case of a schedule conflict, students will be contacted by the counselors.

8. Parents are invited to consult with counselors for assistance in planning school courses of study. Every attempt will be made to schedule conferences at parents’ convenience. To schedule a conference, call 336-1427 or 336-1442.

Grade Point Average (GPA) calculations are achieved by converting the letter grade to a numerical value (as listed below) and multiplying it by the credit value of the course. After calculating each course, find the sum of the courses and then divide it by the total number of courses. Example:

<table>
<thead>
<tr>
<th>Course</th>
<th>Letter Grade</th>
<th>Point Value*</th>
<th>Credit Value</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. AP Biology</td>
<td>B=</td>
<td>3 x</td>
<td>1.00</td>
<td>3.00</td>
</tr>
<tr>
<td>2. English</td>
<td>A=</td>
<td>4 x</td>
<td>1.00</td>
<td>4.00</td>
</tr>
<tr>
<td>3. Geometry</td>
<td>C=</td>
<td>2 x</td>
<td>1.00</td>
<td>2.00</td>
</tr>
<tr>
<td>4. Business Ed.</td>
<td>B=</td>
<td>3 x</td>
<td>1.00</td>
<td>3.00</td>
</tr>
<tr>
<td>4 Courses</td>
<td></td>
<td></td>
<td></td>
<td>12.00</td>
</tr>
</tbody>
</table>

ONLY FINAL GRADES AND FINAL GPAS WILL BE LISTED ON STUDENT TRANSCRIPTS.

*Point Value for Letter Grades -- A=4 points, B=3 points, C=2 points, D=1 point.
X. Weighted Class Rank

Weighted grading is used ONLY for determining class rank, which uses a system as described by the following chart and formula.

<table>
<thead>
<tr>
<th>Percent Grade</th>
<th>Letter Grade</th>
<th>Numerical Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>98-100</td>
<td>A+</td>
<td>12</td>
</tr>
<tr>
<td>93-97</td>
<td>A</td>
<td>11</td>
</tr>
<tr>
<td>90-92</td>
<td>A-</td>
<td>10</td>
</tr>
<tr>
<td>88-89</td>
<td>B+</td>
<td>9</td>
</tr>
<tr>
<td>83-87</td>
<td>B</td>
<td>8</td>
</tr>
<tr>
<td>80-82</td>
<td>B-</td>
<td>7</td>
</tr>
<tr>
<td>78-79</td>
<td>C+</td>
<td>6</td>
</tr>
<tr>
<td>73-77</td>
<td>C</td>
<td>5</td>
</tr>
<tr>
<td>70-72</td>
<td>C-</td>
<td>4</td>
</tr>
<tr>
<td>65-69</td>
<td>D</td>
<td>2</td>
</tr>
<tr>
<td>0-64</td>
<td>F</td>
<td>0</td>
</tr>
</tbody>
</table>

The following quality point values are used for courses.

- AP/College Level Courses = 6 Quality Points
- College Prep Courses = 5 Quality Points
- General Courses = 4 Quality Points
- Developmental Courses = 3 Quality Points
- Co-Curricular Courses = 1 Quality Points

The following are examples of computations of weighted grades:

<table>
<thead>
<tr>
<th>Course</th>
<th>Grade</th>
<th>Numerical Equivalent</th>
<th>x</th>
<th>Quality Points</th>
<th>x</th>
<th>Course Credit</th>
<th>=</th>
<th>Course Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP Biology</td>
<td>A</td>
<td>11</td>
<td>x</td>
<td>6</td>
<td>x</td>
<td>1.0</td>
<td>=</td>
<td>66.0</td>
</tr>
<tr>
<td>CP English</td>
<td>B-</td>
<td>7</td>
<td>x</td>
<td>5</td>
<td>x</td>
<td>1.0</td>
<td>=</td>
<td>35.0</td>
</tr>
<tr>
<td>Algebra II</td>
<td>B</td>
<td>8</td>
<td>x</td>
<td>5</td>
<td>x</td>
<td>1.0</td>
<td>=</td>
<td>40.0</td>
</tr>
<tr>
<td>Art</td>
<td>C+</td>
<td>6</td>
<td>x</td>
<td>4</td>
<td>x</td>
<td>1.0</td>
<td>=</td>
<td>24.0</td>
</tr>
<tr>
<td>Phys. Ed.</td>
<td>A-</td>
<td>10</td>
<td>x</td>
<td>4</td>
<td>x</td>
<td>0.5</td>
<td>=</td>
<td>20.0</td>
</tr>
</tbody>
</table>

The cumulative sum of the course value calculations determines a student’s class rank status within his/her graduating class. Final grades for each course are used in determining class rank.

XI. Transcripts

The student transcript will include the following: Class Rank, Final Grades, Final GPAs, Attendance, and Keystone Exam results.
DIVISION I ACADEMIC REQUIREMENTS

College-bound student-athletes will need to meet the following academic requirements to practice, receive athletic scholarships, and/or compete during their first year.

Core-Course Requirement
Complete 16 core courses in the following areas:

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>ENGLISH</td>
<td>MATH</td>
<td>NATURAL/ PHYSICAL SCIENCE</td>
<td>ADDITIONAL ENGLISH, MATH OR NATURAL/ PHYSICAL SCIENCE</td>
<td>SOCIAL SCIENCE</td>
</tr>
<tr>
<td>4 years</td>
<td>3 years</td>
<td>2 years</td>
<td>1 year</td>
<td>2 years</td>
</tr>
</tbody>
</table>

**Full Qualifier**
- Complete 16 core courses.
- Ten of the 16 core courses must be completed before the seventh semester (senior year) of high school.
- Seven of the 10 core courses must be in English, math or science.
- Earn a core-course GPA of at least 2.300.
- Earn the ACT/SAT score matching your core-course GPA on the Division I sliding scale (see back page).
- Graduate high school.

**Academic Redshirt**
- Complete 16 core courses.
- Earn a core-course GPA of at least 2.000.
- Earn the ACT/SAT score matching your core-course GPA on the Division I sliding scale (see back page).
- Graduate high school.

**Full Qualifier:**
College-bound student-athletes may practice, compete and receive athletics scholarships during their first year of enrollment at an NCAA Division I school.

**Academic Redshirt:**
College-bound student-athletes may receive athletics scholarships during their first year of enrollment and may practice during their first regular academic term, but may NOT compete during their first year of enrollment.

**Nonqualifier:**
College-bound student-athletes cannot practice, receive athletics scholarships or compete during their first year of enrollment at an NCAA Division I school.
### Test Scores

When a student registers for the SAT or ACT, he or she can use the NCAA Eligibility Center code of **9999** so his or her scores are sent directly to the NCAA Eligibility Center from the testing agency. Test scores on transcripts will **NOT** be used in his or her academic certification.

A combined SAT score is calculated by adding reading and math subscores. An ACT sum score is calculated by adding English, math, reading and science subscores. A student may take the SAT or ACT an unlimited number of times before he or she enrolls full time in college. If a student takes either test more than once, the best subscore from different tests are used to meet initial-eligibility requirements.

If a student took the SAT before March 2016 and then took the redesigned SAT at a later date, the NCAA Eligibility Center will not combine section scores from the old and redesigned SAT when determining his or her initial eligibility. The NCAA Eligibility Center will only combine section scores from the same version of the test. Because the redesigned SAT varies in design and measures different academic concepts than the old SAT, a numerical score on the old test may not be equivalent to the same numerical score on the redesigned test.

<table>
<thead>
<tr>
<th>Division I Full Qualifier Sliding Scale</th>
<th>Division I Full Qualifier Sliding Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core GPA</strong></td>
<td><strong>SAT</strong></td>
</tr>
<tr>
<td>3.550</td>
<td>400</td>
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<tr>
<td>3.525</td>
<td>410</td>
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<tr>
<td>3.500</td>
<td>420</td>
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<tr>
<td>3.475</td>
<td>430</td>
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<td>3.450</td>
<td>440</td>
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<td>3.425</td>
<td>450</td>
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<td>3.400</td>
<td>460</td>
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<td>3.375</td>
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<td>3.300</td>
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<td>3.275</td>
<td>510</td>
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<td>3.250</td>
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<td>3.225</td>
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<td>3.200</td>
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<td>3.175</td>
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<td>3.150</td>
<td>560</td>
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<td>3.100</td>
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<td>3.075</td>
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<tr>
<td>3.050</td>
<td>600</td>
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<tr>
<td>3.025</td>
<td>610</td>
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<tr>
<td>3.000</td>
<td>620</td>
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<td>2.975</td>
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<tr>
<td>2.950</td>
<td>640</td>
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<td>2.925</td>
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<td>2.900</td>
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<td>2.875</td>
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<td>2.850</td>
<td>680</td>
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<td>2.825</td>
<td>690</td>
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<tr>
<td>2.800</td>
<td>700</td>
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<tr>
<td>2.775</td>
<td>710</td>
</tr>
</tbody>
</table>
2018 DIVISION II NEW ACADEMIC REQUIREMENTS

College-bound student-athletes first enrolling at an NCAA Division II school on or after August 1, 2018, need to meet new academic rules to practice, compete and receive athletics scholarships during their first year.

Core-Course Requirement
Complete 16 core courses in the following areas:

<table>
<thead>
<tr>
<th>ENGLISH</th>
<th>MATH (Algebra I or higher)</th>
<th>NATURAL/PHYSICAL SCIENCE (including one year of lab science, if offered)</th>
<th>SOCIAL SCIENCE</th>
<th>ADDITIONAL</th>
<th>ADDITIONAL (English, math, natural/physical science, social science, foreign language, comparative religion or philosophy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 years</td>
<td>2 years</td>
<td>2 years</td>
<td>2 years</td>
<td>3 years</td>
<td>4 years</td>
</tr>
</tbody>
</table>

**Full Qualifier**
- Complete 16 core courses.
- Earn a core-course GPA of at least 2.200.
- Earn the ACT/SAT score matching your core-course GPA on the Division II full qualifier sliding scale (see back page).
- Graduate high school.

**Partial Qualifier**
- Complete 16 core courses.
- Earn a core-course GPA of at least 2.000.
- Earn the ACT/SAT score matching your core-course GPA on the Division II partial qualifier sliding scale (see back page).
- Graduate high school.

**Full Qualifier:**
College-bound student-athletes may practice, compete and receive athletics scholarships during their first year of enrollment at an NCAA Division II school.

**Partial Qualifier:**
College-bound student-athletes may receive athletics scholarships during their first year of enrollment and may practice during their first regular academic term, but may NOT compete during their first year of enrollment.

**Nonqualifier:**
College-bound student-athletes may not practice, compete or receive athletics scholarships during their first year of enrollment at an NCAA Division II school.
Test Scores

If a student took the SAT before March 2016 and then took the redesigned SAT at a later date, the NCAA Eligibility Center will not combine section scores from the former and redesigned SAT when determining his or her initial eligibility. The NCAA Eligibility Center will only combine section scores from the same version of the test. Because the redesigned SAT varies in design and measures different academic concepts than the former SAT, the Eligibility Center will apply the College Board’s concordance tables when performing academic certifications for students with redesigned SAT scores.

*To compare SAT scores, click here for a comparison table, or click here to visit the College Board’s website.

<table>
<thead>
<tr>
<th>DIVISION II Full Qualifier Sliding Scale</th>
<th>DIVISION II Partial Qualifier Sliding Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>USE FOR DIVISION II BEGINNING AUGUST 2018</strong></td>
<td><strong>USE FOR DIVISION II BEGINNING AUGUST 2018</strong></td>
</tr>
<tr>
<td><strong>CORE GPA</strong></td>
<td><strong>SAT</strong></td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>3.300 &amp; above</td>
<td>400</td>
</tr>
<tr>
<td>3.275</td>
<td>410</td>
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<tr>
<td>3.250</td>
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<td>3.225</td>
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<tr>
<td>2.225</td>
<td>830</td>
</tr>
<tr>
<td>2.200</td>
<td>840 &amp; above</td>
</tr>
</tbody>
</table>

NCAA is a trademark of the National Collegiate Athletic Association.
Agriculture is our nation's largest employer and Lancaster County's largest industry. Its future depends on having the best and brightest young people become leaders in science, production, international marketing, genetics, engineering, food science, computers, horticulture, food science, biotechnology, tissue culture, veterinary science, and much more. There are more than 200 rewarding and challenging agriculture careers - promising jobs that offer opportunity for financial gain as well as personal growth and satisfaction.

Students enrolled in agriculture courses have the opportunity to join the FFA as an extracurricular activity. Through the FFA, students learn by doing, develop leadership skills, experience personal growth, and explore career goals. Possible accomplishments are only limited by the energy that is put into the program. Students in FFA have the opportunity to compete in various contests at the local, state, and national levels and to travel and meet new people.

All students will be required to have safety glasses for shop classes. All agriculture education courses are considered electives. **Agriculture Education classes are taught at Ephrata Area High School.**

### Ag Courses

<table>
<thead>
<tr>
<th>Grades 9-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honors Animal Science</td>
</tr>
<tr>
<td>Supervised Agriculture Experience (SAE)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grades 10 - 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honors Wildlife and Natural Resources</td>
</tr>
<tr>
<td>Biotechnology (1/2 year)</td>
</tr>
<tr>
<td>Introduction to Ag Mechanics</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag Co-Op</td>
</tr>
</tbody>
</table>
Honors Animal Science 473
Grade Level: 9, 10, 11, 12
Credits: 1 Credit

This is a science course for students who enjoy learning about and working with animals, both pets and livestock. Students receiving a B or higher in the course are eligible to receive 3 transfer credits at either Harcum College or Delaware Valley University. In the course, students are introduced to basic biology concepts as they apply to domestic animals. The class will work with livestock animals to study reproduction, growth and nutrition. Dissections of livestock specimen will also be included as available to study anatomy. Students will learn some of the challenges of veterinary medicine as they explore topics like animal health and disease. A unit of ecology will also be included. Field trips and guest speakers will be incorporated throughout the course to highlight career possibilities. Students are expected to keep a formal lab book and learn about current events in the animal sciences through journal reports. Leadership development and public speaking skills are taught to increase self-confidence and sharpen communication skills needed for success in a competitive society. FFA membership is open to any student in the class and participation is strongly encouraged. This course counts as an EHS science credit; however it is NOT an NCAA approved science course.

Biotechnology 4516
Grade Level: 9, 10, 11, 12
Credits: 1 Credit

Prerequisite: Teacher approval

This course is designed to allow Agricultural students the opportunity to work independently on agricultural related projects outside of class time for academic credit and/or be enrolled in an Agriculture course to retain FFA membership. A minimum of 120 hours is required to meet the basic time requirement and FFA record books will be kept for the SAE project. Projects may include but are not limited to Animal Crew, research, home improvement, employment, or livestock projects. A student may be enrolled in this course for up to four years. Because this course does not meet during the regular school day, students are required to meet with the instructor after school at least once a month. In addition to submitting record books each quarter, students will also complete mini projects each marking period.

Supervised Agriculture Experience (SAE) 4618
Grade Level: 9, 10, 11, 12
Credits: 1 Credit

Prerequisite: Teacher approval

This course is designed to allow Agricultural students the opportunity to work independently on agricultural related projects outside of class time for academic credit and/or be enrolled in an Agriculture course to retain FFA membership. A minimum of 120 hours is required to meet the basic time requirement and FFA record books will be kept for the SAE project. Projects may include but are not limited to Animal Crew, research, home improvement, employment, or livestock projects. A student may be enrolled in this course for up to four years. Because this course does not meet during the regular school day, students are required to meet with the instructor after school at least once a month. In addition to submitting record books each quarter, students will also complete mini projects each marking period.
Introduction to Ag Mechanics 4520
Grade Level: 10, 11, 12
Credits: 1 Credit

This introductory mechanics course provides students with a basic overview of safety, repair, maintenance, and construction involving woodworking, small gas engines, electricity and welding. The course will balance classroom instruction with hands-on application of theories and concepts. Students will use hand tools and power machinery to complete both required and individual projects. Emphasis will be on developing a broad base of skills for the industry. Students are required to keep a course portfolio. FFA membership is open to any student in the class and participation is strongly encouraged.

Honors Wildlife & Natural Resources 4526
Grade Level: 10, 11, 12
Credits: 1 Credit

Students receiving a "B" or higher in this course are eligible to receive 3 transfer credits at Delaware Valley University. This is a science course for students who enjoy spending time outdoors, exploring Pennsylvania's wildlife. Lessons will reinforce basic biology and environmental science concepts as they relate to native birds, fish, mammals, and reptiles. Students will focus on different Pennsylvania habitats including cities, forests, fields, wetlands, rivers as well as the species of animals and plants found there. In addition to learning new species however, they will explore the complex relationships between species and their environments. Habitat conservation and best management practices will be highlighted and large projects will also allow students to study and apply key concepts outside of the classroom. A field trip to Middle Creek Wildlife Management Area and guest speakers will be incorporated throughout the course to highlight career possibilities as well. The course places an emphasis on field biology by studying the work of several naturalists and teaches students to make their own observations. FFA Membership is open to any student in the class and participation is strongly encouraged. This course counts as an EHS science credit, however it is NOT an NCAA approved science course.

Ag Co-Op 4635
Grade Level: 12
Credits: 1 Credit

Prerequisite: Completion of 2 agriculture courses and teacher approval

Student will be dismissed to work at approved job sites. Approval must be granted prior to enrollment. This work experience program will demonstrate the importance of relating students' academic and vocational skills to their ability to seek, obtain, and maintain a job. It consists of on-the-job training, which is provided by a local employer and is supervised by the agricultural instructor. Students are expected to keep FFA record books of hours worked, skills learned, and a work agreement signed by the employer, student, agriculture instructor, and parents.
**ART**

**Studio Art (2-D) 504**
Grade Level: 9, 10, 11, 12  
Credits: 1 Visual and Performing Arts Credit  
Career Pathways:  

- Students in the class will be responsible for paying a $25 lab fee for their class materials.  
- Limited to a maximum of 24 students per section.

Students will be able to choose from the following disciplines: drawing, painting, computer art, and portfolio. The semester is divided into two units. The introductory course must be taken upon entering the course for the first time. Upon completion of the introductory course, the students select an area of concentration for independent study.

**Drawing** - is designed to give students the opportunity to work in a variety of different styles of drawing: scratchboard, charcoal, pen & ink, and pastels. Areas of study also include: cartooning, design, figure drawing, portraiture, still life, and wildlife drawing.

**Painting** - gives students the opportunity to work in a wide variety of subject matter and materials. Students may work in watercolor, acrylic, and oil paint.

**Computer Art** - is designed to give students the opportunity to work in a variety of digital media. Areas of study include: animation, web design, digital illustration, and digital art.

**Portfolio** - allows prospective art school students to develop artwork for use in portfolio submission to art schools. Students will be aided in portfolio preparation and presentation.

**Studio Art (3-D) 505**
Grade Level: 9, 10, 11, 12  
Credits: 1 Visual and Performing Arts Credit  
Career Pathways:  

- Students in the class will be responsible for paying a $25 lab fee for their class materials.  
- Limited to a maximum of 24 students per section.

Students will be able to choose from the following disciplines: ceramics (clay) and sculpture. The semester is divided into two units. In each unit, the introductory courses are offered. Upon completion of the introductory course, the students have the choice of selecting another introductory course or they may work independently in an advanced course.

**Ceramics (Clay)** - is designed to educate the student about all of the techniques used in creating pottery. Areas of study will involve: throwing on the potter’s wheel, pinch and coil pots, clay sculpture, masks, molds, slab plates, and boxes. Glazing is also a main focus of this class.

**Sculpture** - is designed to allow the student to study a variety of sculpture techniques: pariscraft, wood, found object, paper mache, clay and plaster. Students will create three-dimensional pieces of artwork.
Personal Finance 400
Grade Level: 9
Credits: 1 Business Education Credit
Career Pathways: Periods per Cycle: 6
Length of Course: 90 days
Quality Points - 4 (General)

Personal Finance focuses on preparing students for the future financial responsibilities that they will face in everyday life. The course is taught using real world terminology and concepts (such as tax returns, paychecks, bank statements, credit cards, 401K accounts, mutual funds, mortgages, and monthly budgets); however, it is presented in a format that students can relate to and understand.

A comprehensive “Family Financial Management “ practice set is a major part of the curriculum, which helps teach and reinforce the concepts learned in the eight units. The following units will be covered with a variety of computer/internet projects, hands on completion of forms and documents, educational videos, and exams.

*The Job Market  *Budgeting  *Checking/Savings accounts/Money Management I  *Credit
*Paychecks and Tax Returns  *Housing  *Owning and Operating a Car  *Investments

AP Microeconomics 423
Grade Level: 10, 11, 12
Credits: 1 Business Education Credit
Career Pathways: Periods per Cycle: 6
Length of Course: 90 days
Quality Points - 6 (AP)

Class projects, midterm and final exam projects, web pages.
This college level course is designed to provide students with a thorough understanding of the principles of economics as they apply to individual decision-making units, including households and firms. Students will examine the theory of consumer behavior, the theory of the firm and the behavior of profit-maximizing firms under various market structures. They will evaluate the efficiency of the outcomes with respect to price, output, consumer surplus and producer surplus. Students will examine the behaviors of households and businesses in factor markets and learn how the determination of factor prices, wages, interest and rent influence the distribution of income in a market economy.

Students enrolled in AP courses are expected to take the AP exam
Computer Programming 404
Grade Level: 9, 10, 11, 12
Credits: 1 Business Education Credit
Career Pathways:  

Prerequisite: Algebra I

Class projects, Internet activities, hands-on projects and simulations
This course will introduce students to the world of programming through the highly structured language of JAVA. JAVA is the beginning course for programming and problem solving skills. The course topics include programming methodology, control statements, user-defined classes, user interfaces and arrays. Logical, orderly thinking patterns are emphasized. No prior programming experience is necessary. Students may need to spend additional time outside of the classroom on the computer to complete the programming assignments. This class is strongly encouraged for those students who wish to pursue careers in mathematics, science, technology and computer science.

Economics Through the Stock Market 405
Grade Level: 10, 11, 12
Credits: 1 Business Education Credit
Career Pathways:  

Class projects; Internet activities, hands-on projects, and simulations
Economics Through the Stock Market is a class that takes students inside the U.S. economy and shows them why a gallon of gas or an iPod costs what it does. The class will also demonstrate numerous investment opportunities and strategies so students can make their hard-earned money work for them. Students who like engaging activities and simulations will benefit from this class.

Students who take this course will participate in a statewide “on-line” stock market simulation. The simulation is a 10-week competition in which each team receives an imaginary $100,000 and must invest the money in the stock market with a goal of making as much money as possible in ten weeks. Students will be taught lessons in investing such as buying on margin, short-selling, and investments in commodities.

Other economic lessons will be incorporated using the “Virtual Business” simulation. Students will manage their own “on-line” convenience store, and they will be required to make decisions concerning pricing, purchasing, and advertising. Students start their own business from scratch and manage it from a single store to a chain of stores.

Through these simulations, students will learn first hand the components of economics. Economic standards are met in a way that will allow students to understand the role of the economy in everyday living.
Accounting I 408
Grade Level: 10, 11, 12
Credits: 1 Business Education Credit
Career Pathways:

Accounting I is a great course for anyone who intends to be involved in the field of business, or is planning to attend college to major in business. Accounting is defined as: planning, recording, analyzing, and interpreting financial information. Through a variety of workbook, Excel, and automated accounting activities, students will gain an understanding of how to prepare and analyze important financial documents of a business.

Knowledge of Accounting can be applied to all areas of business such as marketing, management, human resources, finance and business information systems.

Accounting II 409
Grade Level: 10, 11, 12
Credits: 1 Business Education Credit
Career Pathways:

Prerequisite: Accounting I or permission of Instructor
Final project required.

Accounting II continues with the concepts learned in Accounting I. In addition, Accounting II incorporates Managerial Accounting concepts such as budget planning, performance reports, break even sales calculations, and financial statement analysis. Cost Accounting is also emphasized in this course, with particular attention being paid to manufacturing costs and records.

The automated accounting software will continue to be a part of the accounting curriculum, and Excel activities will be used to further study various accounting concepts.

Accounting III 410
Grade Level: 11, 12
Credits: 1 Business Education Credit
Career Pathways:

Prerequisite: Accounting II
Midterm and final projects required.

Accounting III focuses on decisions made internally within a business. Information generated by Managerial Accountants is used for making decisions such as: setting prices, determining the cost of manufacturing an item, granting credit to customers, managing inventory, leasing or buying equipment, and projecting revenues and costs. This class will prepare students who are planning a career in accounting or those majoring in business in college. Computers are used on a daily basis.
Microsoft Office & Information Technologies 413

Grade Level: 9, 10, 11, 12
Credits: 1 Business Education Credit
Career Pathways:

Class projects, internet activities, final exam project

Microsoft Office and Information Technologies is a class that will train the students in the various Microsoft Office programs that are needed to become a Microsoft Office Specialist. Students will have the opportunity to develop and improve their competencies in word processing, spreadsheet, desktop publishing, video edition, and presentation applications and will complete a series of real-world projects. By using the Microsoft Office software skills taught in this class, students will complete business and financial documents; organize data; and create and design marketing documents, databases and promotional presentations. These projects will increase the competency and productivity using Microsoft Office applications. The Microsoft Office Specialist skills taught will make any student a more qualified candidate when seeking job opportunities.

Students will be learning Microsoft Office using the Windows Operating System. They will be able to create, modify, edit and present the following applications:

- Windows Movie Maker (15%)
- Microsoft Word (40%)
- Microsoft Excel (25%)
- Microsoft Publisher (10%)
- Microsoft PowerPoint (10%)

There will be a final exam project integrating the above mentioned applications.

Entrepreneurship and Management 420

Grade Level: 11, 12
Credits: 1 Business Education Credit
Career Pathways:

In a world full of “Self-Made Millionaires” it should come as no surprise that owning and managing a business is an interest of today’s students. Entrepreneurship and Management is a hands-on course that will teach students the skills needed to establish and manage a business. This course is designed to study the different forms of business entities, how to begin a business, and operate a business as an entrepreneur or manager.

This hands-on course teaches students about various aspects of business ownership including: pricing, merchandising, bookkeeping, advertising/promotions, inventory control, cost analysis, and business planning. Students will apply what they learned from the classroom to real life business situations through simulations, projects, competitions and assignments using computer technology. The ultimate goal of this course, upon completion, is for the students to realize whether or not owning and operating a business is a likely career choice for them.
Cocalico Honors Internship 421
Grade Level: 12
Credits: 1 Business Education Credit
Career Pathways:

This course is a career exploration and training program for seniors that is established as a partnership between Cocalico High School, local businesses/industries and the students. The main focus of the program is to support students in identifying careers of interest in a hands-on approach to learning. In order to determine a grade for personal work experiences, students will be evaluated by the employer on a monthly basis, with a portion of the final grade being determined by the average of monthly evaluation scores.

Career Seminar 422
Grade Level: 11, 12
Credits: 1 Business Education Credit
Career Pathways:

This course is designed to help students begin to plan for their future. Students examine their individual aptitudes and interests to determine possible career paths. They will also research career path options and learn basic job preparation skills. Whether pursuing college or employment after high school, the units in this course will teach practical skills that can be used in all aspects of employment as well as in personal life.

Marketing 426
Grade Level: 10,11,12,
Credits: 1 Business Education Credit
Career Pathways:

This class will teach students the fundamentals of Marketing that help drive the United States economy and how U.S. companies do business in international markets. Knowledge of Microsoft Office (Word, Excel, and PowerPoint), as well as iMovie will greatly benefit students in this class.

In the Marketing segment of the course we will focus on why businesses spend billions of dollars each year on marketing their product to consumers. Students will be able to target an industry of their choice (sports, entertainment, fashion, or other) to complete the required course projects. Team work and group activities will be a major part of this course.

The course will also have an International Marketing component where we will study the emerging global economy and how businesses market their products to other countries. Major topics include: Cultural & Social Difference, Importing/Exporting and International Trade, International Investing, Currency Exchange Rates and Government/Legal influences on International Trade.
The English program in the high school includes two tracks of courses in Grades 9 and 10. Juniors and seniors are permitted to select Communication Arts, American Literature, British Literature, Interpretation through Dramatic Literature, and Advanced Placement courses. In addition to the required English credits, several elective special interest courses are offered. All courses, which are one semester in length, include a survey of literature, composition, vocabulary, speech, grammar, research and discussion. Students who plan to take the Advanced Placement course should receive an A average in their previous English courses.

All courses are worth 1.0 credit. Since 9th and 10th grade courses are sequential, students must pass English 9 before enrolling in English 10 or other upper-level courses. Students who exhibit a high degree of proficiency in language arts may double up in upper-level courses.
English 9: Communication Arts 001
Grade Level: 9
Credits: 1 Communications and Literature Credit
Career Pathways:

Prerequisites: English Grade 8
This course will include activities in communications and literature. The communications instruction will include basic grammar, composition, vocabulary building, library instruction, and speech. The literary background will include examination of the four basic forms of literature: short story, drama, novel, and poetry. It is required that students desiring to take this course have met the prerequisites and have obtained knowledge of the course requirements.
A broad variety of instructional techniques will be employed in the classroom, including collaborative exercises, small group work, lecture, writing, speech, demonstration, discussion, individual exercise, and peer evaluations. The final grade will include the marking period grades and a final exam.

American Literature & Composition 003
Grade Level: 10
Credits: 1 Communications and Literature Credit
Career Pathways:

Prerequisites: English 9: Communication Arts 001 (Grade of B or better or teacher recommendation) or English 9: Communication Arts 030 (Grade of A or teacher recommendation)
This course includes activities in communications and literature in preparation for the Literature Keystone Exam. The communications instruction will include literature-based essays and a literary analysis research paper. Literary material covered includes a survey of American authors from the Puritans and the Founding Fathers through the Romantics, Realism, and modern writers.
A broad variety of instructional techniques will be employed in the classroom including essays, reading, dramatic interpretation, collaborative exercises, small group work, lecture, discussion, individual exercises and research. The final grade will be determined by averaging the marking period grades and a final exam.

World Literature & Composition 014
Grade Level: 10, 11, 12
Credits: 1 Communications and Literature Credit
Career Pathways:

Prerequisites: American Literature & Composition 002 (Grade of B or better or teacher recommendation) or English 10: Communication Arts 031 (Grade A or teacher recommendation)
Students who did not have college preparatory English must demonstrate advanced or proficient persuasive and expository writing before enrolling in this course. This course will include activities in communications and literature. The communications instruction will include basic grammar, composition, vocabulary building, speech, and college exploration. Also included in the course is a persuasive research paper. It should be taken by students preparing for a post-secondary degree program. The course includes a variety of literature, including mythology, science fiction, Shakespeare, and short stories.
A wide variety of instructional techniques are employed in the classroom including discussion, small group activities, cooperative learning, demonstration, library research, and lecture. The final grade for the course will be determined by averaging the marking period grades with a final exam.
British Literature & Composition 004
Grade Level: 11, 12
Credits: 1 Communications and Literature Credit
Career Pathways: 

Prerequisites: American Literature & Composition 002 (Grade of B or better or teacher recommendation) 
or English 10: Communication Arts 031 (Grade A or teacher recommendation) 
This course will include activities in communications and literature. The communications instruction will include varied literature-based academic essays and a literary analysis research paper. Literary material covered includes a survey of British authors from Beowulf and The Canterbury Tales through Shakespeare, the Age of Reason, the Romantics, and Victorians to some modern writers.

Students who did not have college preparatory English must demonstrate competency in writing before enrolling in this course.

A broad variety of instructional techniques will be employed in the classroom including essays, reading, dramatic interpretation, collaborative exercises, small group work, lecture, discussion, individual exercises, and research. The final grade will be determined by averaging the marking period grades, the grade on the literary analysis research paper, and a final exam.

Interpretation Through Dramatic Literature 006
Grade Level: 10, 11, 12
Credits: 1 Communications and Literature Credit
Career Pathways: 

Prerequisites: American Literature & Composition 003 (Grade of B or better or teacher recommendation) 
or English 10: Communication Arts 031 (Grade A or teacher recommendation) 
This is a college prep course that may be taken in place of either World Literature and Composition or British Literature and Composition, or it may be taken as an elective in addition to either of those courses, or Advanced Placement English. The course is performance-based featuring the study of dramatic literature throughout the ages. Also included in the course are composition, oral interpretation, and a literary analysis/research project. Students who enroll in this course will be required to perform in front of an audience. A broad variety of instructional techniques will be employed in the classroom including dramatic performance, essays, collaborative exercises, small group work, lecture, demonstration, discussion, individual exercises, and research. The final grade will be determined by averaging the marking period grades with a research paper, a final performance, and a final writing.
AP Literature & Composition 008

Grade Level: 11, 12
Credits: 1 Communications and Literature Credit
Career Pathways:

Periods per Cycle: 6
Length of Course: 90 days
Quality Points - 6 (Honors/AP)

Prerequisites: A successfully written literary analysis paper and Grade of A (or teacher override) in American Literature and Composition 003.

A teacher recommendation and parent commitment form are also required.

Designed for top-level students, this course prepares students for the Advanced Placement exam (in May) that may be counted for college credit. Through examination of poetry, fiction, drama, and some non-fiction, students will become adept at analyzing literary works in terms of structure, meaning, and style. Students enrolling in this course should be prepared to write at least one essay a week, either as a timed, in-class response to literature or as an out-of-class assignment. Additionally, students will read several novels and shorter works, some of which will be assigned as summer reading. Participation in class discussions is an essential part of success in the course.

Students taking the course in the fall will be required to attend three mandatory spring semester study sessions. Multiple dates will be provided. These students will also be required to write AP-style essays prior to attending each review session in order to maintain level of preparedness for the exam. The grade for the course will be determined by averaging the marking period grades and the grade on a final exam similar to the Advanced Placement Exam.

Students enrolled in AP courses are expected to take the AP exam.

AP Language & Composition 009

Grade Level: 11, 12
Credits: 1 Communications and Literature Credit
Career Pathways:

Periods per Cycle: 6
Length of Course: 90 days
Quality Points - 6 (Honors/AP)

Prerequisites: A successfully written literary analysis paper and grade of A (or teacher override) in American Literature & Composition.

A teacher recommendation and parent commitment form are also required.

Designed for top-level students, this course prepares students for the Advanced Placement exam (in May) that may be counted for college credit. Along with poetry, drama, and fiction, students will read memoirs, essays, speeches, and other non-fiction works from various time periods. They will also practice writing their own persuasive essays and memoirs. Students will examine the way authors use the tools of language to construct arguments, influence audiences, and create meaning.

Students enrolling in this course should be prepared to write at least one essay a week, either as a timed, on-demand writing, or out-of-class assignment. Additionally, students will read three or four novels, two memoirs, one historical book, one science or nature book, and several shorter works, some of which will be assigned as summer reading. Participation in class discussions is an essential part of success in the course.

Students taking the course in the fall will be required to attend three mandatory spring semester study sessions. The grade for the course will be determined by averaging the marking period grades and the grade on a final exam similar to the Advanced Placement Exam.

Students enrolled in AP courses are expected to take the AP exam.
English 9: Communication Arts 030
Grade Level: 9
Credits: 1 Communications and Literature Credit
Career Pathways:

This course includes various activities in communication skills, composition and literature in preparation for the Writing Keystone Exam. Students will enhance their public speaking skills through formal and informal speech, classroom discussion, and debate. The composition portion of the course will include a variety of writing for various purposes and audiences. Students will also explore a host of literary works, including mythology and Shakespeare, and will respond to these explorations through various means. A wide variety of instructional techniques is employed in the classroom, including discussion, debate, reading, writing, speaking, lecture, small group work, and hands-on projects. The final grade for the course will be determined by averaging the marking period grades with a final exam.

English 10: Communication Arts 031
Grade Level: 10
Credits: 1 Communications and Literature Credit
Career Pathways:

This course includes various activities in communication skills, composition, and literature in preparation for the Literacy Keystone Exam. Students will enhance their public speaking skills through formal speech, classroom discussion, and debate. The composition portion of the course will include a variety of writing for differing purposes and audiences. Students will also explore a host of literary works and will respond to these explorations through various means. A wide variety of instructional techniques and learning opportunities will be employed in the classroom, including reading, writing, speaking, lecture, small group work, and hands-on projects. The final grade for the course will be determined by averaging the marking period grades with a final exam.

English 11: Communication Arts 032
Grade Level: 11
Credits: 1 Communications and Literature Credit
Career Pathways:

Prerequisite: Passing grade in English 10
This course is designed to expand upon previous knowledge in writing, speaking, and vocabulary and is appropriate for students who need to strengthen basic reading and writing skills. A broad variety of instructional techniques will be employed in the classroom including collaborative exercises, learning stations, small group work, lecture, demonstration, discussion, and individual exercise. The final grade will include the marking period grades, a written final, and a final exam. Completion of a research project/paper is required for successful completion of the course.
English 12: Communication Arts 033
Grade Level: 12
Credits: 1 Communications and Literature Credit
Career Pathways:

Prerequisite: Passing grade in English 11
Besides instruction in composition, the communications phase of the course includes individual speaking and writing experiences, as well as some collaborative work. The literature includes thematic and cultural units, which focus on the way students respond to literature and apply lessons from literature to real-life situations. Thematic topics include such areas as the changing role of the hero, connections with the past, and the state of the human condition. A variety of literature will be utilized throughout the course.
A broad variety of instructional techniques will be employed in the classroom including collaborative exercises, learning stations, small group work, lecture, writing, speech, demonstration, discussion, individual exercise, and peer evaluations. The final grade will include the marking period grades, a writing project and a final exam.

Language Acquisition 833
Grade Level: 9, 10, 11, 12
Credits: 1 Communications and Literature Credit
Career Pathways:

This course will focus on theme-based language acquisition skills. Instruction will concentrate on development of reading, writing, speaking, and listening skills at the appropriate proficiency level determined by each student’s placement on the WIDA Access Placement Test. Multiple assessment methods are used to advance English Language Learners to higher levels of ESL instruction or to exit from the program. In addition, instruction will orientate students to cultural differences such as nonverbal communications skills, American idioms, and regional differences in dialect.
This course is based on students’ needs. A range of assessment methods are directed towards assessing individual achievement in language acquisition. The final grade for the course will be determined by averaging the two marking period grades.

Literacy Enrichment 021
Grade Level: 9
Credits: 1 Communications and Literature Elective Credit
Career Pathways:

This course is designed for students who need further instruction in or continued support of reading strategies and their application. Students will enhance their skills for lifelong learning, specifically in reading content area materials. Students will be assigned to this course based on several criteria, including data accumulated from previous assessments. This course will be counted as an elective and will be taken in addition to the required number of English courses.
Speech/Creative Writing 052
Grade Level: 11, 12
Credits: 1 Communications and Literature Elective Credit
Career Pathways: 

Prerequisites: English 10 (Grade of C or better)/English teacher recommendation
This course will allow students to develop their speaking and writing skills while learning to appreciate the value of both. The speech portion of the course will include various forms of oral communication such as informative presentations, persuasive arguments, demonstrations, and impromptu speeches. Students will also critique famous speeches. Every speech is required in order to pass the course.
The creative writing portion of the course will allow the students to explore their creative side when expressing their ideas through writing. They will also read and learn to appreciate numerous examples of creative writing. They will write stories, plays, poems, journals, and other forms of creative writing. All written assignments in the course are required and must be completed in order to pass the course.
Vocabulary words relating to speech and creative writing will be given regularly. The final grade will include the marking periods grades combined with an all-inclusive project for both sections of the course.

SAT Prep 053
Grade Level: 11
Credits: 1 Communications and Literature Elective Credit
Career Pathways: 

The course is designed to prepare students for the Scholastic Aptitude Test (SAT). A diagnostic evaluation will be given, in addition to various test sections through the course, to evaluate students’ strengths and areas for improvement. The course will offer comprehensive testing strategies and concept reviews for every section and question type on the SAT so that students can confidently tackle each test question. Throughout the semester, students will think critically about future plans in order to make an informed and realistic college decision.

Students will be encouraged to take the PSAT in October. Students will be provided with an SAT Prep book.
Baking 595
Grade Level: 9, 10, 11, 12
Credits: 1 Family and Consumer Science Credit
Career Pathways:

Students in the class will be responsible for paying a $25 lab fee for their class materials.

This course is designed for students who are interested in mastering the art of pastry. Topics include kitchen safety, measuring, equipment, recipe reading, ingredient function, mixing methods, breads, pies, chocolate and cake decorating. Course work will include group work, class work, PowerPoint presentations, food lab, quizzes and tests.

Sewing and Fashion Design 581
Grade Level: 9, 10, 11, 12
Credits: 1 Family and Consumer Science Credit
Career Pathways:

Students in the class will be responsible for paying a $25 lab fee for their class materials.

This course is designed for students who are interested in developing basic sewing skills. Selecting fabrics, sewing equipment and various sewing techniques are taught. Students will have the opportunity to create fashions especially for themselves. Course work will include an understanding of measurement, pattern and fabric selection, pattern adjustments, sewing equipment care and maintenance, as well as hand and machine sewing techniques. Course work will include class work, group work, fabric notebook, various small projects, and a major construction project.

Students will be expected to purchase fabric and supplies for the major project in addition to their lab fee.

Foods 591
Grade Level: 9, 10, 11, 12
Credits: 1 Family and Consumer Science Credit
Career Pathways:

Students in the class will be responsible for paying a $25 lab fee for their class materials.

This course is designed for students who are interested in understanding the principles of basic food preparation as well as the foundations for a healthy lifestyle through proper nutrition, food safety, personal health and well-being. Topics include kitchen safety, equipment, recipe reading, cooking methods, protein, nutrition and global foods. Course work will include group work, class work, PowerPoint presentations, food lab, quizzes and tests.
Child Development 570

Grade Level: 11, 12
Credits: 1 Family and Consumer Science Credit
Career Pathways:  

Periods per Cycle: 6
Length of Course: 90 days
Quality Points - 4 (General)

Students will explore the theories, stages and characteristics of Child Development. Topics covered include parenting, prenatal development, child safety, lesson plan development for a preschool setting, and characteristics of each stage of development. Student will learn how to prepare lesson plans, observe children in a classroom setting and practice developing age appropriate educational activities for children of all ages and stages of life.
Individualized services and programs are available to students who are determined to need specially designed instruction due to the following needs:

- Autism/Pervasive Developmental Disorder
- Deaf – Blindness
- Developmental Delay (Early Intervention)
- Emotional Disturbance
- Intellectual Disability
- Multiple Disabilities
- Other Health Impairments
- Orthopedic Impairment
- Specific Learning Disability
- Speech and Language Impairment
- Sensory Impairment – Vision Impairment/Hearing Impairment
- Traumatic Brain Injury

If you believe that your student may be in need of special education services and related programs, screening and evaluation processes designed to assess the needs of the student and his/her eligibility are available. Concerns should be directed to the student’s guidance counselor. Students identified with autism may be eligible for Itinerant Autistic Support services. Services may include: direct instruction in social thinking skills, executive functioning skills and job skills.

**Direct Instruction Classes**

Students are scheduled to take direct instruction courses based on the goals and objectives that are outlined in their IEPs. Classes in the curricular areas of reading, writing, mathematics, and personal choices/decision making are taught by Special Education teachers.

**S.K.I.L.L.S. 879**

S= Self-Advocacy
K=Knowledge
I=Independence
L=Learning
L=Living
S=Success

S.K.I.L.L.S. is a work-based learning program that focuses on preparing students for the work force. This work-based learning environment provides experiences that contribute to the career development and work readiness of students. This program also supplements experiences with school and community-based activities that reinforce the learning outside the classroom. Furthermore, this program provides students with opportunities to practice learned skills and implement them in real-life situations. By participating in real-life work activities such as paid and volunteer work crews (independent and group), competitive employment, independent work-study, internships, tours and job shadows, students hone their work skills and further their independence.

**CTC Cluster Programs 901(AM) or 902 (PM)**

<table>
<thead>
<tr>
<th>Grade Level: 11</th>
<th>Periods per Cycle: 6</th>
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<tbody>
<tr>
<td>Credits: 4 Credits</td>
<td>Length of Course: 180 days</td>
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<tr>
<td>Quality Points - 4 (General)</td>
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</tbody>
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Students may apply for one of five half-day Cluster Programs offered during their junior year at Brownstown Career and Technology Center. Introductory programs in Construction, Manufacturing, Transportation, Culinary and Visual Communications allow students to explore careers and gain valuable instruction in a “hands-on-setting”. Students will then be eligible to apply for a more career specific program during their senior year.
MATHEMATICS

Recommended Mathematics Tracks

Option 1

Pre-Algebra → Algebra I 103A → Algebra I 103B → Geometry 123 → Algebra II 113
098

Statistics 140
Pre-College Math 132

Option 2

Algebra I 103 → Geometry 123 → Algebra II 113

Statistics 140
Pre-College Math 132

Option 3

Honors Algebra II 114 → Geometry 124 → Honors Pre-Calculus/Trig 135 → Statistics 140

Honors AP Statistics 142
Applied Calculus 143 → AB 144 → BC 146
Keystone Enrichment - ALG 096

Grade Level: 10, 11
Credits: 1 Elective Credit
Career Pathways:

The Algebra I Keystone exam is retaken at the end of this course.

This course is for a student who passed Algebra I but did not score proficient or advanced on the Algebra I Keystone. The course reviews topics and prepares students to retake the Algebra I Keystone at the end of the semester. Students who do not score at least proficient after retaking the Algebra I Keystone exam will be required to complete the Algebra I Project Based Assessment.

Pre-Algebra I 098

Grade Level: 9, 10
Credits: 1 Math Credit
Career Pathways:

A written final exam is required for this course.

Pre-Algebra is a beginning course in algebra. The course length allows for pacing that suits student abilities. Topics of study include signed numbers, exponents, solving equations, graphs, and statistical applications of Algebra.

Algebra I 103

Grade Level: 9, 10 Credits:
1 Math Credit
Career Pathways:

The Algebra 1 Keystone exam is taken at the end of this course.

A written final exam is required for this course.

Algebra I is a beginning course in algebra. Topics of study include solving and graphing linear equations/inequalities, absolute value equations/inequalities, and systems of linear equations/inequalities. The curriculum also includes factoring quadratics and data analysis. Students who are not proficient on the Algebra I Keystone exam will be required to take the the Keystone Enrichment Course before retaking the exam.

Students are encouraged to have their own TI-84 Plus CE, TI-84 Plus or TI-84 graphing calculator.

Algebra I 103A

Grade Level: 9, 10
Credits: 1 Math Credit
Career Pathways:

A written final exam is required for this course.

Algebra I 103A is the first course in a two semester course that prepares students for the Algebra I Keystone exam at the completion of Algebra I 103B. Topics of study include solving linear equations and inequalities, graphing and writing linear functions, solving systems of linear equations and exponential functions and sequences.

Students are encouraged to have their own TI-84, TI-84 Plus or TI-84 Plus CE graphing calculator.
Algebra I 103B
Grade Level: 9,10,11
Credits: 1 Math Credit
Career Pathways: 

Prerequisite: Algebra I 103A
The Algebra Keystone exam is taken at the end of this course.
A written final exam is required for this course

Algebra I 103B is the second in a two semester course that prepares students for the Algebra I Keystone exam. Topics of study include polynomial equations and factoring, graphing and solving quadratic functions, radical functions and equations, probability and data analysis. The course will also review topics and prepare students to take the Algebra I Keystone exam at the end of the semester. Students who do not score at least proficient after taking the Algebra I Keystone exam will be required to complete the Keystone Enrichment course in order to retake the Algebra I Keystone exam.

Students are encouraged to have their own TI-84, TI-84 Plus or TI-84 Plus CE graphing calculator.

Algebra II 113
Grade Level: 10,11
Credits: 1 Math Credit
Career Pathways: 

Prerequisite: Algebra I 103, Algebra I 103A, Algebra I 103B and Geometry 123
A written final exam is required for this course.

Algebra II is a continuation of algebra I for students who scored proficient or advanced on the Algebra I Keystone Exam. Topics include an extensive study of quadratic functions and applications, powers, roots, radicals, polynomials and polynomial functions, applications of variations and mathematical modeling.

Students are highly encouraged to have their own TI-84 Plus CE, TI-84 Plus or TI-84 graphing calculator.

Honors Algebra II 114A
Grade Level: 9
Credits: 1 Math Credit
Career Pathways: 

Prerequisite: Recommendation of math teacher
A written final exam is required for this course.

Honors Algebra II is a continuation of Algebra I from the middle school for students who scored proficient or advanced on the Algebra I Keystone Test. Topics include an extensive study of quadratic functions and applications, powers, roots, radicals, polynomials and polynomial functions, exponential and logarithmic functions, rational functions, and applications of variations and mathematical modeling.

A TI-84 Plus CE, TI-84 Plus or TI-84 graphing calculator is highly encouraged for this course.
**Geometry 123**
Grade Level: 10, 11
Credits: 1 Math Credit
Career Pathways:

Prerequisite: Algebra I 103 or Algebra I 103A and Algebra I 103B

A written final exam is required for this course.

Students will use an informal guided discovery approach and work with a variety of geometric tools to discover geometric properties by experimentation and observation. Students will develop independent thinking skills and collaboration skills, while they investigate geometric definitions, create works of art, complete constructions, and discover geometric relationships. Students will also be introduced to geometric proofs.

**Honors Geometry 124A**
Grade Level: 9, 10
Credits: 1 Math Credit
Career Pathways:

Prerequisite: Honors Algebra II 114 or teacher recommendation

A written final exam is required for this course.

Students will use an informal guided discovery approach and work with a variety of geometric tools to discover geometric properties by experimentation and observation. Students will develop independent thinking skills and collaboration skills, while they investigate geometric definitions, create works of art, complete constructions, and discover geometric relationships. All topics will be covered in depth as students learn to establish geometric truths through the writing and development of proofs.

**Pre-College Math 132**
Grade Level: 11, 12
Credits: 1 Math Credit
Career Pathways:

Prerequisite: Geometry 123 and Algebra II 113

Several projects and a written final exam are required in this class.

A variety of essential mathematics topics needed for any student to be successful in higher education will be presented. The course consists of six units, probability, one-variable statistics, two-variable statistics, functions, sequences and series, and discrete math topics.

Students should have one of these calculators: TI-84 Plus CE, TI-84 Plus or TI-84 graphing calculator.

**Precalculus/Trigonometry 135**
Grade Level: 10, 11, 12
Credits: 1 Math Credit
Career Pathways:

Prerequisite: Geometry 123 and Algebra II 113

A written midterm and final exam will be required in this course.

Pre-calculus topics including functions, exponentials, logarithms and trigonometry are included using both graphical and algebraic methods. Students electing this course should have one of these calculators: TI-84, TI-84 Plus or TI-84 Plus CE. This course is intended for students planning to take Applied Calculus.
Honors Precalculus/Trigonometry 135A
Grade Level: 10, 11, 12  
Credits: 1 Math Credit  
Career Pathways:  

Prerequisite: Honors Geometry 124 and Honors Algebra II 114  
A written midterm and final exam will be required in this course.

Pre-calculus topics including functions, exponentials, logarithms and trigonometry are included using both graphical and algebraic methods. Graphing calculators are required for this course. Students electing this course should have one of these calculators: TI-84, TI-84 Plus or TI-84 Plus CE. This course is intended for students planning to take Applied Calculus and Advanced Placement Calculus.

Statistics 140
Grade Level: 11, 12  
Credits: 1 Math Credit  
Career Pathways:  

Prerequisite: Algebra II 113  
A written final exam is required for this course.

This course is an opportunity for students to learn statistics at an in-depth perspective in preparation for college. Topics include descriptive statistics, probability, normal distributions, confidence intervals, and hypothesis testing. A TI-84, TI-84 Plus or TI-84 Plus CE graphing calculator is required for this course.

AP Statistics 142
Grade Level: 11, 12  
Credits: 1 Math Credit  
Career Pathways:  

Prerequisite: Students must have earned an A or B in Honors Algebra II 114 or an A in Algebra II 113.  
A written final exam is required for this course.

AP Statistics provides students with the opportunity to earn college credit for statistics upon earning a high score on the AP test. Topics include descriptive statistics, probability, normal distributions, confidence intervals, and hypothesis testing. The complete curriculum is available as given in the College Board AP Statistics information. A TI-84, TI-84 Plus, or TI-84 Plus CE graphing calculator is required for this course. The students will also be required to do prep work for this class. Students should consult with instructor before enrolling in this course. Students enrolled in AP courses are expected to take the AP exam.

Applied Calculus 143
Grade Level: 11, 12  
Credits: 1 Math Credit  
Career Pathways:  

Prerequisite: Precalculus 135 or Honors Precalculus 135A  
A written final exam will be required in this course.

Applied Calculus topics include polynomial, rational, radical, exponential, logarithmic and functions. Also included will be the limits, derivatives and anti-derivatives of those functions and numerous applications to science, business, economics and life and social science. Graphing calculators are required for this course. Students electing this course should have one of these calculators: TI-84, TI-84 Plus, or TI-84 Plus CE.
AP Calculus AB 144
Grade Level: 11, 12
Credits: 1 Math Credit
Career Pathways:

Prerequisite: Honors Precalculus 135A, Applied Calculus 143 and/or teacher recommendation
A written final exam will be required in this course.

Advanced Placement Calculus includes the theory and application of limits, derivatives, and integrals, including algebraic, trigonometric, and transcendental functions. All topics required for the AB Advanced Placement Calculus test are included. Students must have access to and know how to use a graphing calculator. Students should consult with the instructor before enrolling in this course.

Students enrolled in AP courses are expected to take the AP exam.

AP Calculus BC 146
Grade Level: 11, 12
Credits: 1 Math Credit
Career Pathways:

Prerequisite: AP Calculus AB 144
A written final exam will be required in this course.

Advanced Placement Calculus BC includes the theory and applications of limits, derivatives, integrals, sequences and series, polar and parametric equations. All topics required for the BC Advanced Placement Calculus Exam are included. Students need to have access to and know how to use a graphing calculator. This course will require students to learn independently, using the instructor as a resource for difficult to understand topics. Students must receive permission from the instructor prior to enrolling in this course.

Students enrolled in AP courses are expected to take the AP exam.

AP Computer Science A 147
Grade Level: 10, 11, 12
Credits: 1 Elective Credit
Career Pathways:

Prerequisite: Computer Programming (Grade of B or better)
A written final exam will be required for this course.

AP Computer Science A is a course that introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. Students must receive permission from instructor before enrolling in this course.

Students enrolled in AP courses are expected to take the AP exam.
Music 9 498
Grade Level: 9
Credits: 0.5 Visual and Performing Arts Credit
Career Pathways:

This class focuses on the current trends in music and music technology. Students analyze musical concepts through the following activities: listening, performing, and composing.

**Students will take this course for 45 days; the other 45 days will be in physical education.**

Music Studio 508
Grade Level: 10, 11, 12
Credits: 1 Visual and Performing Arts Credit
Career Pathways:

Music Studio is designed as an outgrowth of students’ experiences in Music 9. This class provides music students with instruction in the elements of music, recording, composing/arranging, and mixing. Hands-on learning takes place through the use of a computer, recording studio and MIDI keyboard lab. In this setting, students analyze professional mixes, study specific musical concepts and their functions, and apply the knowledge with lots of creative development time by composing and arranging original works in GarageBand and Logic. The software offers a wide palette of loops/beats (woodwinds, brass, strings, percussion, and sound effects) and additional effects that inspire and aid in the creation of viable and impressive products. Opportunities for recording voices and/or instruments will be provided as well.

Music Studio II 520
Grade Level: 10, 11, 12
Credits: 1 Visual and Performing Arts Credit
Career Pathways:

Music Studio II is designed as an outgrowth of students’ experiences in Music Studio and is designed to provide serious music students with instruction in the elements of music, recording, composing, and mixing. Hands-on learning takes place through the use of a computer and MIDI keyboard lab. In the setting, students analyze pre-composed music, study specific musical concepts and their functions, and apply the knowledge by composing and arranging original compositions. The software will offer a wide palette of loops/beats (woodwinds, brass, strings, percussion, and sound effects) that inspire and aid in the creation of viable and impressive compositions. Opportunities for recording your voice and/or instrument (guitar and orchestral) will be provided as well.
Music Theory 509
Grade Level: 10, 11, 12  
Credits: 1 Visual and Performing Arts Credit
Career Pathways:  
Periods per Cycle: 6  
Length of Course: 90 days  
Quality Points - 5 (College Prep)

This course explores intermediate techniques of writing and analyzing music. Students will complete this course with a basic knowledge of writing a 4-part musical composition. The course contains components in composition/analysis, arranging, basic music theory concepts, basic part writing skills, basic listening skills, and chord analysis. All students who are interested in advancing their musical knowledge can benefit from this course.

Choir I 500
Grade Level: 9, 10  
Credits: 1 Visual and Performing Arts Credit
Career Pathways:  
Periods per Cycle: 6  
Length of Course: 90 days  
Quality Points - 4 (General)

Choir I is open to all students in Grades 9 and 10 who have an interest in developing their vocal skills. In this class, students are introduced to choral repertoire from different time periods and in different languages. Students in choir develop vocal techniques and musicianship skills. They also learn to recognize and utilize terminology in choral music. Students interested in both band and choir should see the information in the “Wind Ensemble/Choir” courses.

This course also includes some mandatory out-of-school performance.

Choir II 502
Grade Level: 11, 12  
Credits: 1 Visual and Performing Arts Credit
Career Pathways:  
Periods per Cycle: 6  
Length of Course: 90 days  
Quality Points - 5 (College Prep)

Choir II is open to all students in Grades 11 and 12 who have an interest in developing their vocal skills. In this class, students are introduced to choral repertoire from different time periods and in different languages. Students in choir develop vocal techniques and musicianship skills. They also learn to recognize and utilize terminology in choral music. Students interested in both band and choir should see the information in the “Wind Ensemble/Choir” courses.

This course also includes some mandatory out-of-school performances.

Wind Ensemble I 507
Grade Level: 9, 10  
Credits: 1 Visual and Performing Arts Credit
Career Pathways:  
Periods per Cycle: 6  
Length of Course: 90 days  
Quality Points - 4 (General)

Prerequisite: Entrance by audition.
Must also take Symphonic Band 518 or Symphonic Band/Choralaires 519 both semesters in the same school year.

This course is designed for students in Grades 9 and 10 who have been accepted via audition to Wind Ensemble. Students will work and rehearse music of various time periods and levels. Students will rehearse and perform basic music-reading skills through advanced musician techniques, including rhythm, note values, meter, key signatures, breathing techniques, and composers associated with each work.

This course also includes some mandatory out-of-school performances.
Wind Ensemble II 510
Grade Level: 11, 12
Credits: 1 Visual and Performing Arts Credit
Career Pathways:  
Prerequisite: Entrance by audition.
Must also take Symphonic Band 518 or Symphonic Band/Choralaires 519 both semesters in the same school year. This course is designed for students in Grades 11 and 12 who have been accepted via audition to Wind Ensemble. Students will work and rehearse music of various time periods and levels. Students will rehearse and perform basic music-reading skills through advanced musician techniques, including rhythm, notes, note values, meter, key signatures, breathing techniques, and composers associated with each work. This course also includes some mandatory out-of-school performances.

Wind Ensemble I/Choir I 512
Grade Level: 9, 10
Credits: 1 Visual and Performing Arts Credit
Career Pathways:  
Prerequisite: Entrance by audition.
Must also take Symphonic Band 518 or Symphonic Band/Choralaires 519 both semesters in the same school year. This course is designed for students in Grades 9 and 10 who perform in both band and choir. Please refer to the course descriptions for Wind Ensemble I and Choir I for more details. These courses meet at the same time, and students will alternate class time between the two courses.

Wind Ensemble II/Choir II 516
Grade Level: 11, 12
Credits: 1 Visual and Performing Arts Credit
Career Pathways:  
Prerequisite: Entrance by audition.
Must also take Symphonic Band 518 or Symphonic Band/Choralaires 519 both semesters in the same school year. This course is designed for students in Grades 11 and 12 who perform in both band and choir. Please refer to the course descriptions for Wind Ensemble II and Choir II for more details. These courses meet at the same time, and students will alternate class time between the two courses.

Choralaires 517 (Focus)
Grade Level: 9, 10, 11, 12
Credits: 0.5 Visual and Performing Arts Credit
Career Pathways:  
Prerequisite: Entrance by audition only.
Choralaires is designed to provide advanced vocalists with a smaller vocal ensemble opportunity. Students will develop their vocal technique. Advanced musicianship skills will be developed through high level choral repertoire, vocal exercises, and public performances. Choral repertoire will be chosen from a variety of historical time periods, including contemporary music. Different styles and languages are chosen to provide awareness of musical style and performance techniques. This course also includes several mandatory out-of-school performances.

PARTICIPATION IN CHOIR I/II IS HIGHLY RECOMMENDED IN THE SAME SCHOOL YEAR
Symphonic Band 518 (Focus)

Grade Level: 9, 10, 11, 12
Credits: 0.5 Visual and Performing Arts Credit
Career Pathways:

30-minute weekly instrumental sectionals are required.

This course is open to all students in Grades 9-12 who have developed a high level of proficiency on a brass, woodwind, or percussion instrument. Course requirements include regular practice/demonstration of progress. The course also includes some mandatory out-of-school performances. Music will be rehearsed to develop the skills needed to excel on the student's selected instrument.

Symphonic Band/Choralaires 519 (Focus)

Grade Level: 9, 10, 11, 12
Credits: 0.5 Visual and Performing Arts Credit
Career Pathways:

Prerequisite: Entrance by audition only
30-minute weekly instrumental sectionals are required.

This course is a combination of Choralaires and Symphonic Band. It is designed for students interested in both Symphonic Band and Choralaires. Please refer to the course descriptions above. Students enrolled in this course will alternate rehearsals between Choralaires and Symphonic Band.

PARTICIPATION IN CHOIR I/II IS HIGHLY RECOMMENDED

Music Studio with Guitar 521

Grade Level: 10, 11, 12
Credits: 1 Visual and Performing Arts Credit
Career Pathways:

This course is designed as an outgrowth of students’ experiences in Music 9 and is open to students who have already taken Music Studio I. This class provides music students with instruction in the elements of music, recording, mixing and guitar performance. Hands-on learning takes place through the use of a computer, recording studio and MIDI keyboard lab and guitar. In the lab setting, students analyze professional mixes, study specific musical concepts and their functions, and apply the knowledge with lots of creative development time by composing and arranging original works in GarageBand and Logic. Opportunities for recording voices and/or instruments will be provided as well. In the classroom setting, students will learn beginning and intermediate guitar performance skills, including playing melodies and chord patterns, improvising and performing strategies.

Students may use their own guitar or one will be provided by the school district.
PHYSICAL EDUCATION/HEALTH

The Cocalico High School Physical Education program is designed to prepare our youth for a lifetime of health and physical fitness.

Physical Education 9 604
Grade Level: 9
Credits: 0.5 Credit
Career Pathways:

Periods per Cycle: 6
Length of Course: 45 days
Quality Points - 4 (General)

Grades will be based on class preparation, class participation, physical fitness testing, written and skill testing.

Ninth grade P.E. is designed to develop the individual's best physical capacities, improve social competencies and teamwork, teach appropriate emotional responses, foster recreational skills with an emphasis on team sports, movement, personal fitness, and adventure activities. Students are taught fundamentals and given opportunities to develop these through active coed participation.

Students will take this course for 45 days; the other 45 days will be Music.

Physical Education 10 606
Grade Level: 10
Credits: 0.5 Credit
Career Pathways:

Periods per Cycle: 6
Length of Course: 45 days
Quality Points - 4 (General)

Grades will be based on class preparation, class participation, physical fitness testing, written and skill testing.

Physical education is designed to develop the individual's best physical capacities, improve social competencies and teamwork, teach appropriate emotional responses, foster recreational skills with an emphasis on team activities, movement, and personal fitness. Students are taught fundamentals and given opportunities to develop these through active coeducational participation.

Students will take this course for 45 day; the other 45 days will be in Health I.

Health I 600
Grade Level: 10
Credits: 0.5 Credit
Career Pathways:

Periods per Cycle: 6
Length of Course: 45 days
Quality Points - 4 (General)

This course addresses emotional health, understanding stress, risks, coping with death, decisions, communications, self-value, teen mental wellness, driver's safety education, drug and alcohol addiction, human sexuality, sexually transmitted diseases, pregnancy, fitness and nutrition. Class assessments will include tests, group activities, mandatory formal report, and a final exam. Students will split this course with Physical Education.
Physical Education 11 607
Grade Level: 11
Credits: 0.5 Credit
Career Pathways:

Periods per Cycle: 6
Length of Course: 45 days
Quality Points - 4 (General)

**Grades will be based on class preparation, class participation, physical fitness testing, written and skill testing.**
Physical education is designed to develop the individual's best physical capacities, improve social competencies and teamwork, teach appropriate emotional responses, foster recreational skills with an emphasis on lifetime activities, and personal fitness. Students are taught fundamentals and given opportunities to develop these through active coeducational participation.

**Students will take this course for 45 days; the other 45 days will be in Health II.**

Health II 603
Grade Level: 11
Credits: 0.5 Credit
Career Pathways:

Periods per Cycle: 6
Length of Course: 45 days
Quality Points - 4 (General)

This course addresses a holistic approach to wellness through understanding disease/illness prevention including information on diet and exercise, and how these areas are interrelated. Included in this course will be discussions and activities on topics such as sexually transmitted infections, first aid, community CPR, and diseases. Class assessments will include tests, group activities, CPR and first aid skills, completion of a mandatory final project and a required three-day calorie journal. Students will split this course with Physical Education.

Adapted Physical Education 816
Grade Level: 9,10,11,12
Credits: 0.5 Credit
Career Pathways:

Periods per Cycle: 6
Length of Course: Based on Need
Quality Points - 4 (General)

This course is provided so that all students may participate in physical education. Any student with a disability limiting him/her from regular physical education classes will have modified instruction. Any adapted physical education program must be based on a physician's medical diagnosis and recommendations. Adapted physical education is composed of two specific categories: modified physical education and remedial physical education. Modified physical education is taking the well-known physical education activities and adapting them to specially restricted needs. Remedial physical education is individually designed to serve student needs.
Applied Physical Education:
A Human Performance Lab 611
Grade Level: 11, 12
Credits: 1 Credit
Career Pathways:

This course required each student to identify an area of physical weakness and select a fitness plan that will improve this area over the semester long class. Each student will research the topic/physical attribute to be improved upon, explore previous researched exercises, and design a Personal Exercise Program (P.E.P.) that will help the student reach their fitness goal. The student will be given daily class time to work on their P.E.P. Participants are expected to employ the F.I.T.T. Principle, and the Specific Adaptation to Imposed Demand Principle in an attempt to achieve their goal. The student will perform objective physical tests in order to measure entry levels, progress tests to measure improvement, and exit tests to measure final outcomes. Class is held primarily in the Cocalico Senior High Fitness Center, but also uses the gyms and outdoor athletic fields and facilities for regular class activities.

Personal Fitness, Cardio and Strength Training 612
Grade Level: 11, 12
Credits: 1 Credit
Career Pathways:

Prerequisites: a Grade of B or better in previous physical education class or teacher recommendation
This course requires a combination for weight training, cardio respiratory activities, flexibility exercises, as well as team and individual sports to improve a student's overall fitness. This course focuses on physical fitness through personal fitness assessment followed by individual goal setting. Students will engage in activities that will improve both health and skill-related elements of fitness. Students will review the elements of fitness and principles of exercise and use them to achieve their fitness goals (this includes flexibility, cardiovascular endurance, muscular strength, muscular endurance and body composition). The primary goal of this course is to improve "personal fitness". Students will be taught information on how to set personal fitness goals and achieve them. Class assessments will be based on student created personal fitness plans, quizzes, as well as student participation levels. Students will be creating lessons based upon their fitness goal/plan. They will then teach a "section" of their plan to their classmates. All students in this class will be introduced to a variety of examples of fitness including but not limited to: Zumba, P90X, Insanity, obstacles, circuit training, app inclusion, technology in PE, heart rate monitors and yoga.
Advancements in science and technology have produced a rapidly changing world. Students must be well prepared in science, since it applies to their life experiences. The major goal of the science department is to help students understand the concepts which form the foundation of science in their everyday lives.

General Science Department Requirements:
1. All students need to complete Principles of Science, Biology, a chemical science (Chemistry or Chemistry in the Community), and a physical science (Physics or Principles of Technology) before graduation. (CTC students are an exception to this policy due to scheduling constraints.
2. All science students should expect to be required to take a written midterm and/or final exam.
3. Please note any special requirements that may be documented in specific course selections.

Recommended Science Tracks

A track is a sequential process. Each science student will be advised by his/her instructor in choosing the course of study that best meets the student’s career goals.

**Option 1**

**Principles of Science 201 → Biology 204**

- Chemistry in the Community 219 → Principles of Technology 217
- Chemistry 207 → CTC
- Physics 209

**Option 2**

**Principles of Science 201**

- Biology 204 → AP Chem 208
  - AP Bio 206
  - Anatomy/Phys. 205
  - Env. Science 214
  - AP Physics 210
- Chemistry 207 → Physics 209
- Honors Biology 204A
Principles of Science 201
Grade Level: 9
Credits: 1 Science Credit
Career Pathways:

This course builds on the science background acquired in earlier grades and also introduces concepts that are part of an integration of the scientific knowledge of geology, meteorology, oceanography, and astronomy. The course is closely related to a student's everyday experiences and to the environment. Principles of Science is intended to meet the requirements for selected state standards and is a starting point for a student’s high school science education.

A variety of learning techniques are used in classroom instruction including: lab investigations, learning stations, lecture, discussion, demonstration, cooperative learning, and technology.

Biology 204
Grade Level: 9, 10
Credits: 1 Science Credit
Career Pathways:

Prerequisite: Principles of Science

This course stresses the basis of knowledge within the biological sciences that every person should know. Concepts include cellular biology, plant and animal anatomy and physiology, taxonomy, evolution, genetics, and ecological relationships. Through lecture, class discussions, group work, problem solving, and library research, activities are presented in such a manner that students will develop a scientific perspective from which they can appraise future events in their lives.

Honors Biology 204A
Grade Level: 9, 10
Credits: 1 Science Credit
Career Pathways:

Prerequisites: Recommendation from previous science teacher; a Grade of B or better in English, Science, and Math courses in previous grade

This course focuses on the needs of academically successful students who have a serious interest in science. Participating students should desire to meet the additional challenges of classroom work that emphasizes an in-depth look at biological concepts and applications as well as discussion and debate of current issues in science.

This course stresses knowledge within the biological sciences. Concepts include cellular biology, plant and animal anatomy and physiology, taxonomy, evolution, genetics, and ecological relationships. Through lecture, class discussions, group work, problem solving, and library research, activities are presented in such a manner that students will develop a scientific perspective from which they can appraise future events in their lives.
Anatomy & Physiology 205
Grade Level: 11, 12
Credits: 1 Science Credit
Career Pathways:

Prerequisite: Principles of Science, Biology, Chemistry (Grade of C or better)
The material covered will emphasize hands-on, active student participation (vertebrate dissection and laboratory activities) rather than rote memorization of terminology to acquire the understanding that the human body systems work together to produce a coordinated, smooth-working entity in health (homeostasis).
This course is an elective. Students are still required to take a course in Chemistry and Physics to meet graduation requirements.

Students in the class will be responsible for a $40 lab fee to cover the cost of class materials.

AP Biology 206
Grade Level: 11, 12
Credits: 1 Science Credit
Career Pathways:

Prerequisite: Principles of Science, Biology, Chemistry (Grade of C or better)
AP Biology deals with life at the molecular and organismic level, and its structure, function, and interactions. It aims to provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically with the rapidly changing science of biology. Teaching methods include lecture, demonstrations, and inquiry-based investigations. This course is designed for students whose future may require a strong background in biology. Units will include the bio-chemical nature of life (molecules and cells), heredity and evolution, the diversity of organisms, the structure and function of major systems of plants and animals, and ecology. This course is an elective. Students are still required to take Physics or Principles of Technology.

The AP Biology course will place great emphasis on independent study and research. Students should consult with the instructor before enrolling in this course.

Students enrolled in AP courses are expected to take the AP exam.

Chemistry 207
Grade Level: 10, 11, 12
Credits: 1 Science Credit
Career Pathways:

Prerequisites: Principles of Science (Grade of C or better), Algebra 103 (Grade of C or better), Biology (Grade of C or better)
This course is designed to provide students with the science background, lab skills, and a work ethic necessary to succeed in a higher education setting (four-year college, two-year program). This will be achieved through a balance of experimentation, observation, and various in-class problem-solving activities/discussions. Student attendance and daily participation are very beneficial for succeeding in this course.
AP Chemistry 208
Grade Level: 11, 12
Credits: 1 Science Credit
Career Pathways:

Prerequisites: Chemistry (Grade of B or better), Algebra II (Grade of B or better), Physics (Grade of C or better)

This course must be taken concurrently with an advanced math course.

AP Chemistry will strive to equip students with a depth of understanding of fundamentals and a reasonable competence in dealing with mathematical concepts related to chemical problems. The course will contribute to the development of the student's abilities to think clearly and express their ideas, orally and in writing, with clarity and logic. The topics covered include atomic theory and atomic structure, chemical bonding, states of matter, solutions, reaction types, stoichiometry, equilibrium, kinetics, thermodynamics, analytical chemistry, and organic chemistry. Students should consult with the instructor before enrolling in this course.

Students enrolled in AP courses are expected to take the AP exam.

Physics 209
Grade Level: 10,11,12
Credits: 1 Science Credit
Career Pathways:

Prerequisites: Algebra II, Chemistry
Corequisites: Pre-Calculus or Calculus; Chemistry (with teacher approval)

Physics is a study of the physical world, matter, and energy. Mathematical relationships are developed and discussed through a combination of demonstrations, lectures, laboratory experiences, and projects. The course is designed around an inquiry approach based on critical thinking in a lab setting. The course includes mechanics, wave analysis, and electricity.

AP Physics 210
Grade Level: 11, 12
Credits: 1 Science Credit
Career Pathways:

Prerequisite: Physics (Grade of B or better)
Corequisites: Calculus (or Pre-Calculus, with instructor's permission)

Physics is a study of the physical world, matter, and energy. Mathematical relationships are developed and discussed through a combination of demonstrations, lectures, laboratory experiences, and projects. The course includes an algebra based approach to mechanics, wave analysis, electricity, and magnetism. Students enrolling in this course should be prepared to devote additional time to study outside of class.

Students enrolled in AP courses are expected to take the AP exam.
Environmental Science 214

Periods per Cycle: 6
Length of Course: 90 days
Quality Points - 4 (General)

Grade Level: 11, 12
Credits: 1 Science Credit
Career Pathways:

Prerequisite: Principles of Science, Biology, Algebra I

This course is designed to improve student awareness of the natural world and to add depth to their understanding of environmental problems. This course is an elective. Students are still required to take Chemistry in the Community or Chemistry, and Physics or Principles of Technology.

Concepts include: ecosystems, biochemical cycles, pollution, land use, population growth, energy, and environmental policies. Through discussions, laboratory and field activities, case studies and research, students will develop an increased level of appreciation for the environment and the skills necessary to address the environmental issues we are facing now and in the future.

Astronomy/Meteorology 215

Periods per Cycle: 6
Length of Course: 90 days
Quality Points - 4 (General)

Grade Level: 11, 12
Credits: 1 Science Credit
Career Pathways:

Prerequisite: Principles of Science and Biology with a grade C or above, and Algebra I

OR Principles of Science, Biology, Chemistry or Chem Com. and Algebra I.

Astronomy and Meteorology is an elective course offered for those students interested in receiving a more in-depth understanding of the world around them as it relates to weather and the universe.

The Astronomy course will begin with an introduction to early Astronomy and progress through the thoughts and ideas which have led us to our current theories about the universe. The course aims to show the size and scope of the universe through a detailed exploration of how our Earth interacts with the sun and the moon as well as Earth’s place in our solar system, galaxy, and ultimately the known universe.

The Meteorology course aims to explain how the atmosphere interacts with Earth’s surface to produce weather. In order to achieve this understanding, students will complete labs which require the manipulation of data related to fronts and air masses, as well as use real-life weather maps to record and analyze data. After gaining an understanding of air pressure and atmosphere/surface interactions, students will use their knowledge to predict weather.

This course is an elective. Students are still required to take a course in Chemistry or Chem Com and Physics or Principles of Technology to meet graduation requirements.
**Principles of Technology 217**  
Grade Level: 11, 12  
Credits: 1 Science Credit  
Career Pathways:  

*Prerequisite: Principles of Science and Biology*

This is an applied science course for vocational and technical students that builds a firm foundation for understanding technology both for today and tomorrow. This course will provide students with hands-on experience and the fundamental problem-solving skills that they will need to adapt to the changing work environments that they will face on the job. It applies science principles to technological situations and will concentrate on the use of science in the workplace. Principles of Technology presents an integrated package of competency-based text materials, hands-on laboratory activities, and mathematical skill labs. The course is based on thematic units that build on the knowledge learned in the previous units. Because of the nature of the course, students having one credit of physics may not select this course.

**Chemistry in the Community 219**  
Grade Level: 11, 12  
Credits: 1 Science Credit  
Career Pathways:  

*Prerequisite: Principles of Science and Biology*

Chemistry in the Community (ChemCom) is a course in which the emphasis is placed on chemistry’s impact on society. The most unique feature of ChemCom is that the chemistry is taught on a “need to know” basis, with societal and technological issues and problems determining the depth and breadth of the chemistry concepts taught. The goals of ChemCom are to:

1. Assist students in realizing the importance of chemistry in their personal and professional lives; and
2. Instill in students an awareness of both the potential and limitations of science and technology.

The course is comprised of units that focus on chemistry-related issues that confront society. The topics presented serve as a foundation for conveying the chemistry necessary to properly analyze and understand these issues. In the analysis, the course incorporates a great number and variety of student-oriented activities including labs, projects and student lab reports.
Service Learning 925
Grade Level: 12
Credits: 0.5 Credit
Career Pathways: 

Assessment based on journal entries and a mentor evaluation.
Service Learning offers students the opportunity to take active and meaningful roles in addressing the issues affecting their lives and their world. They will work closely with an assigned mentor either on or off-site. The Service Learning experience will provide students with the chance to explore and apply real-world skills, develop personal and social responsibility, encourage active citizenship, and reinforce the core civic values of honesty, respect, self-discipline, healthy living, commitment to family and community, and service to others.

Financial Literacy 416
Grade Level: 12
Credits: 0.5 Credit
Career Pathways: 

Financial Literacy is an elective course offered to seniors. Financial Literacy will expose students to financial responsibilities that they face as young adults. The material taught in this course will refresh and enhance what students learned in Personal Finance. Specific topics include: Careers, Paychecks and Tax Returns, Checking and Savings accounts, Types of Credit/Mortgages, Investment Concepts, Insurance and Paying for College. This class will be “project-oriented” and there will be assignments online which will give students exposure to taking an online class. Seniors who are going to college, joining the military or entering the workforce, will all use the content from course.

Physical Education 12 608
Grade Level: 12
Credits: 0.5 Credit
Career Pathways: 

Grades based on class preparation, class participation, physical fitness testing, written and skill testing.
Physical education is designed to develop the individual's best physical capacities, improve social competencies and team-work, teach appropriate emotional responses, foster recreational skills with an emphasis on lifetime activities, and personal fitness. Students are taught fundamentals and given opportunities to develop these through active coeducational participation.
Seniors will be exposed to a variety of tools and strategies that will help them find success as they prepare to enter the next phase of their adult lives. Students will be taught basic techniques to help build attention and focus, increase self-regulation, improve empathy, reduce levels of stress and anxiety and engage in more meaningful communication with others. Cultivating these skills will benefit all seniors whether going to college, joining the military or entering the workforce. Throughout the semester, students will be engaged in journaling, analysis exercises, teaching opportunities and small and large group discussions. They will take the tools they learn in this course and apply them to their lives outside of the classroom. The course will culminate in a project aligned with the student's specific area of interest.

There is a pre-approved listing of online courses from which to choose. Please see your guidance counselor for online course selections and descriptions.
SOCIAL STUDIES/CITIZENSHIP

Recommended Social Studies/Citizenship Track

American Studies 702 → World Studies 703 → Civics and Government 710

American Studies 702
Grade Level: 9
Credits: 1 Citizenship/Social Studies Credit
Career Pathways: 

This required Social Studies course will include the study of United States History from 1870 to the present. The goal of this course is to link historical events to an understanding of the social, political, and economic development of the United States today.

World Studies 703
Grade Level: 10
Credits: 1 Citizenship/Social Studies Credit
Career Pathways: 

This course will focus on the economic, political and social systems in world cultures. The non-western cultures of China, Japan, India, the Middle East and Africa will be emphasized. Each culture's history and current situation will be studied.

AP United States History 706
Grade Level: 10, 11, 12  *offered in 2019-2020
Credits: 1 Citizenship/Social Studies Credit
Career Pathways: 

Prerequisites: Only students receiving at least a 3.0 average for 9th and 10th grade social studies. It is strongly recommended that students have a strong reading and writing background.

Advanced Placement American History is a college level survey class designed for students with an interest in history and a desire to be challenged. Topics in American history from discovery to the present will be covered. The goal is to provide a college level course emphasizing reading, writing, research, and class discussion. The course's intent is to prepare all students to take the Advanced Placement test in May. A college-level text and a variety of primary sources and supplementary materials will be used.

Students enrolled in AP courses are expected to take the AP exam.
Civics and Government 710
Grade Level: 11
Credits: 1 Citizenship/Social Studies Credit
Career Pathways:

This course provides insights to all levels of the American political system. Having a sound comprehension of the governments that affect our daily lives is critical to civic participation. The course will explore the fundamentals of economics, commonwealth government, municipal government, and national government. It will examine in detail the principles, processes, and institutions through which this political system functions, as well as the public policies that these institutions implement. The course is concerned with the nature of the American political system, its development over the past two hundred years and how it continues to function in present-day America.

Psychology 720
Grade Level: 11, 12
Credits: 1 Citizenship/Social Studies Credit
Career Pathways:

Psychology is the study of human behavior. Psychologists attempt to explain why people behave, feel, and think as they do. This course would be valuable to anyone who plans to enter a “people” related field in the future. The course content will include: life stages, workings of the mind and body, learning processes, personality disorders, and social interaction.

Sociology 721
Grade Level: 11, 12
Credits: 1 Citizenship/Social Studies Credit
Career Pathways:

This course focuses on all components of sociology, such as culture, society, social classes, groups, family, religion, and sociological theory. In addition, contemporary social issues such as race relations, the elderly, gender roles, and social changes will be examined.

Military History 715
Grade Level: 10, 11, 12
Credits: 1 Citizenship/Social Studies Credit
Career Pathways:

War is a social construct that has had a major influence on history. From the Egyptians to Alexander to the British empire, entire civilizations have been created or crushed by war. Students who wish to truly understand World history, and in particular, the history of western civilization, can learn about the military aspect of society and its impact on global events. The social, political, and economic repercussions of conflict on past and present generations of global citizens will be examined in this course.
Current Events & Modern History 728
Grade Level: 9, 10
Credits: 1 Citizenship/Social Studies Credit
Career Pathways: Periods per Cycle: 6
Length of Course: 90 days
Quality Points - 5

This course is an elective that focuses on Modern United States history from 1950 to the present, as well as current events. The goal of this course is to provide an in-depth study of Modern America after World War II and a closer look at the current issues in our world.

Local Studies 729
Grade Level: 10, 11, 12
Credits: 1 Citizenship/Social Studies Credit
Career Cluster(s): Periods per Cycle: 6
Length of Course: 90 days
Quality Points - 5 (College Prep)

This course provides insights to the history of Lancaster County and Pennsylvania. The course will explore the different forms of material culture including and not limited to: tombstones, houses and churches, transportation, industry and power, agriculture and barns and food entertainment. Examining in detail these categories of material culture over the period of history from 1700 to the present day will enhance the understanding and appreciation of our local heritage. The course is concerned with the nature of Lancaster County and Pennsylvania, its development over the past two hundred years, and how it continues to evolve in today's rapidly changing world.

AP European History 730
Grade Level: 11, 12 *offered 2018-19 and 2020-2021
Credits: 1 Citizenship/Social Studies Credit
Career Pathways: Periods per Cycle: 6
Length of Course: 90 days
Quality Points - 6 (Honors/AP)

Prerequisites: Only students earning a 3.0 average for the 9th and 10th grade social studies classes. It is strongly recommended that students have a strong reading and writing background.

Advanced Placement European History is a college level survey course of western history, beginning with the Renaissance and Reformation and concluding in the present day. The focus will be on the cultural, economic, political and social developments that have had much influence on the world in which we live. The course is designed to mature a student's reading, writing and analytical skills by utilizing a wide variety of resources, including a college level textbook.

Students enrolled in AP courses are expected to take the AP exam.
Wood Technology I 522
Grade Level: 9, 10, 11, 12
Credits: 1 Technology Education Credit
Career Pathways:

Periods per Cycle: 6  
Length of Course: 90 days
Quality Points - 4 (General)

This is a recommended course for Grade 9.
A written final exam will be required for this course.
Students in the class will be responsible for a $25 lab fee for their class materials.

Students will be required to purchase approved safety glasses for this class which are available from the school.

Wood Technology I is designed to educate the student about the world of machine woodworking. Topics of study will include machine setup and safety, wood processing, joint construction, assembly and finishing of wood products, and furniture designs. Students will be required to complete a variety of woodworking projects, designed with teacher approval.

Electricity/Electronics I 525
Grade Level: 9, 10, 11, 12
Credits: 1 Technology Education Credit
Career Pathways:

Prerequisite: Algebra I

Periods per Cycle: 6  
Length of Course: 90 days
Quality Points - 5 (College Prep)

A project, written final exam, and course notebook will be required for this course.
Students in the class will be responsible for a $25 lab fee for their class materials.

The students enrolled in this course will study the fundamental laws and the mathematical formulas used to calculate electrical quantities in a variety of electrical circuits. Methods of instruction will include experimentation, circuit problem analysis, and other hands-on activities. Topic material will also include terminology, component operation, AC and DC theory, meter usage, printed circuit board construction, and project assembly, as well as problem-solving activities directly related to electricity.

Electricity/Electronics II 545
Grade Level: 10, 11, 12
Credits: 1 Technology Education Credit
Career Pathways:

Prerequisites: electricity/Electronics I
A final Exam is required for this course.

Periods per Cycle: 6  
Length of Course: 90 days
Quality Points - 5 (College Prep)

Students in the class will be responsible for a $25 lab fee for their class materials.

The students enrolled in this course will further explore the fundamentals of electricity and electronics. The course will expand on previous knowledge from Electricity/Electronics I and introduce new concepts in the areas of inductance, capacitance, and semiconductor theory. Methods of instruction will include theory, experimentation, circuit problem analysis, and other hands-on activities. More advanced electronics projects will be constructed throughout this course.
Visual Communications I 526
Grade Level: 9, 10, 11, 12
Credits: 1 Technology Education Credit
Career Pathways: 

This is a recommended course for Grade 9.
A project and written final exam are required for this course.

Students taking this course will be responsible for a $25 lab fee for material usage.
This course is designed to give the student the opportunity to specialize in the study of graphic communications. This course will include units of study in Desktop Publishing, Offset Printing, and Screen Printing. Students will have the opportunity to work on a variety of activities in each of the above areas.

Visual Communications II 549
Grade Level: 10, 11, 12
Credits: 1 Technology Education Credit
Career Pathways: 

Prerequisites: Grade of B or above in Visual Communications I
A project and written final exam are required for this course.
A final project is required for this course.

This second level visual communications course allows students the opportunity to explore advanced projects in the areas of screen printing, and offset printing. The class will expand on the basics learned in VC I. Students will use software provided in the Technology Education computer lab including: InDesign, Adobe Photoshop and Adobe Illustrator. In addition students will use portions of the iLife package including iTunes, iPhoto, and iMovie. This is an exciting communications course, giving students the opportunity for independent project based activities.

Energy, Power, & Transportation 523
Grade Level: 9, 10, 11, 12
Credits: 1 Technology Education Credit
Career Pathways: 

This is a recommended course for Grade 9.
A written final exam will be required for this course.

Students in the class will be responsible for a $25 lab fee for their class materials.

Students will explore applications of energy and power conversion devices and systems, along with the transportation of goods and services. The class will gain an insight into various modes of transportation and the use of energy through the study of basic electricity, the single cylinder engine, magnetic levitation, wind turbine design and flight principles.
Engineering & Design Drafting 529
Grade Level: 9, 10, 11, 12
Credits: 1 Technology Education Credit
Career Pathways:

This is a recommended course for Grade 9.  
A project and practical final exam are required for this course.

This course will concentrate in the development of skills in drafting and design. The concepts will be introduced through activities using sketching, manual drafting, and computer-aided drafting techniques. Course content will include higher-level math skills, engineering geometry, multi-view drawings, pictorial representation, and working drawings. Design and drafting-related problem-solving activities will be included throughout the course.

Architectural Drafting 530
Grade Level: 10, 11, 12
Credits: 1 Technology Education Credit
Career Pathways:

A practical final exam is required for this course.

This course will focus on the principles associated with residential design and construction. Upon completion of the course, the students will have drawn a complete set of residential house plans including floor plans, foundation plan, elevations, schedules, plot plan, and construction details. The use of both board drafting and a computer-aided drafting program will be utilized throughout the course. The development of models will be used to explore many of the phases of construction.

Manufacturing 527
Grade Level: 9, 10, 11, 12
Credits: 1 Technology Education Credit
Career Pathways:

This is a recommended course for Grade 9.  
A written final exam will be required for this class.

Students in the class will be responsible for a $25 lab fee for their class materials.  
Students will be required to purchase approved safety glasses for this class.  
Glasses will be available for purchase from the school.

This course will allow the student the opportunity to learn the basic techniques of material processing to transform raw materials into usable products in a manufacturing setting. Topics of study will include various types of welding, machining and material processing of wood, metals and plastics. This class will form a company to organize, design and produce a product to sell to the general public to create a profit. Students will utilize various technology education labs to design, produce and market their product. This will be a hands-on course with subject matter from various areas of technology education being introduced.
TV Production I 538  
Grade Level: 9, 10, 11, 12  
Credits: 1 Technology Education Credit  
Career Pathways:  

Students in the class will be responsible for a $25 lab fee for their class materials.  
Due to the nature of this course, students will be expected to put in extra time on projects and activities after school.  
A project final exam is required for this course.  
This course will explore the electronic media of television production. Students will have the opportunity to learn and work with the digital equipment in the TV Studio. Topics of exploration include the video camera and its operation, microphones, lighting, sound, and editing. Students will edit their projects using digital editing suites with Final Cut Pro software. Student projects will have the opportunity to air on one of the CHS-TV productions. Students in TV I will also have the opportunity to help produce a live CHS-TV show and learn the basics of the TV Studio control room.

TV Production II 541  
Grade Level: 9, 10, 11, 12  
Credits: 1 Technology Education Credit  
Career Pathways:  

Prerequisites: TV Production I (Grade of B or better).  
Students in the class will be responsible for a $25 lab fee for their class materials.  
Due to the nature of this course, students will be expected to put in extra time on projects and activities after school.  
A project final exam is required for this course.  
This second-level offering in TV Production will allow students the opportunity to explore advanced features of the TV Studio. Students in TV II will produce a CHS-TV News Show. The content of this course will be geared towards on-location productions. This will include unique camera work, field work audio, directing for electronic news gathering, and lighting. Several computer applications, including Adobe Photoshop and Final Cut Pro, will be used in this class. Students will explore these programs in depth while producing packages for class productions.

TV Production III 546  
Grade Level: 10, 11, 12  
Credits: 1 Technology Education Credit  
Career Pathways:  

Prerequisite: TV Production II (Grade of B or better)  
A project final exam is required for this course.  
Students enrolled in this class will take a leadership role in assisting TV Production II class members with the production of the CHS-News Show and the video news magazine, In Focus. Students will be able to design a contract in the “speciality” area they would like to learn more about in an in-depth fashion. All students in TV Production III will spend significant time learning the advanced features of Final Cut Pro on the digital editing stations.
TV Production IV 547

Grade Level: 10, 11, 12
Credits: 1 Technology Education Credit
Career Pathways: 

Prerequisite: TV Production III (Grade of B or better)
A project final exam is required for this course.
Students in the class will be responsible for a $25 lab fee for their class materials.
Due to the nature of this course, students will be expected to put in extra time on projects and activities after school.

Students enrolled in this class will take a leadership role in assisting TV Production II class members with the production of the CHS-News Show and the video news magazine, In Focus. Students will be able to design a contract in the “speciality” area they would like to learn more about in an in-depth fashion. All students in TV Production IV will spend significant time learning the advanced features of Final Cut Pro on the digital editing stations.

Introduction to Engineering Design 535

Grade Level: 10, 11, 12
Credits: 1 Technology Education Credit
Career Pathways: 

Students dig deep into the engineering design process, applying math, science and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems using 3D modeling software, and use an engineering notebook to document their work.

Principles of Engineering 559

Grade Level:
Credits: 1 Technology Education Credit
Career Pathways: 

Prerequisite: Introduction to Engineering Design

Through problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, the strength of structures and materials, and automation. Students develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation.

Digital Photography 548

Grade Level: 9, 10, 11, 12 Credits:
1 Technology Education Credit
Career Pathways: 

Students in the class will be responsible for a $25 lab fee for their class materials.

This course presents the basics of digital photography. It is designed to introduce students to the traditional aspects of photography and to enable them to apply these principles to effective image making in the digital environment. This class will take place in the new “state of the art” digital communications lab and will utilize a variety of digital cameras, flat-screen iMacs, scanners, color laser printers, and various other digital technologies. A wide variety of photographic projects will be completed using the digital cameras, computer hardware, and Adobe Photoshop software.
Hands-on Engineering 536
Grade Level: 10, 11, 12
Credits: 1 Technology Education Credit
Career Pathways:

Prerequisite: Engineering and Design Drafting
Students in the class will be responsible for a $25 lab fee for their class materials.

Technology Education has become more than the study of tools, materials and the processes required to create “things”. The study of technology has become a search for solutions to problems. This STEM-driven course is designed to introduce the student to the importance of problem solving in the advancement of technology. A hands-on approach to design and development of solutions to assigned problems will be the main focus of this course. Throughout the semester, we will utilize the Design/Drafting lab and the Production lab to develop, construct and test the student’s solutions to assigned activities.

Yearbook Production I 044
Grade Level: 9, 10, 11, 12
Credits: 1 Communications and Literature Elective Credit
Career Pathways:

Students enrolled in Yearbook Production I will help produce the yearbook and an online yearbook through layout design, digital photography and writing.

A variety of instructional techniques will be employed in the classroom including collaborative exercises, small group work, demonstration, reading, writing, speaking and peer evaluations.

Yearbook Production II 045
Grade Level: 9, 10, 11, 12 Credits: 1
Communications and Literature Elective Credit
Career Pathways:

Prerequisite: Yearbook Production I (Grade of B or better and instructor approval)

A student enrolled in this elective course will take a leadership role on the yearbook staff, providing guidance and assistance for Yearbook I students. A variety of instructional techniques will be employed in the classroom including collaborative exercises, small group work, demonstration, reading, writing, speaking, and teacher and peer evaluations.
Yearbook Production III 046

Grade Level: 10, 11, 12  
Credits: 1 Communications and Literature Elective Credit
Career Pathways:  

**Periods per Cycle:** 6  
**Length of Course:** 90 days  
**Quality Points:** 5 (College Prep)

*Prerequisites: Yearbook Production II (Grade of B or better and instructor approval)*

A student enrolled in this elective course will take a leadership role on the yearbook staff, providing guidance and assistance for Yearbook Production I and II students. A variety of instructional techniques will be employed in the classroom including collaborative exercises, small group work, demonstration, reading, writing, speaking, and teacher and peer evaluations.

Yearbook Production IV 047

Grade Level: 10, 11, 12  
Credits: 1 Communications and Literature Elective Credit
Career Pathways:  

**Periods per Cycle:** 6  
**Length of Course:** 90 days  
**Quality Points:** 5 (College Prep)

*Prerequisites: Yearbook Production III (Grade of B or better and instructor approval)*

A student enrolled in this elective course will take a leadership role on the yearbook staff, providing guidance and assistance for Yearbook Production I, II and III students. A variety of instructional techniques will be employed in the classroom including collaborative exercises, small group work, demonstration, reading, writing, speaking, and teacher and peer evaluations.
Recommended World Language Tracks

- **Spanish I → Spanish II → Spanish III → Spanish IV → AP Spanish**
- **German I → German II → German III → German IV**

- Level One is required for high school graduation.
- Level Two is the minimum language requirement for entrance to most colleges.
- Level Three is needed for entrance to many colleges (such as Penn State) and also as a college graduation requirement.
- Level Four is highly recommended to refine language skills, which will increase job opportunities for all students.
- AP Spanish is highly recommended for language fluency and college/career readiness. Students must double up during one school year to reach this level.

**Spanish I 301**

- Grade Level: 9, 10, 11, 12
- Credits: 1 World Language Credit
- Career Pathways:

  "A final written and oral exam, which includes a listening, speaking and reading component, is a requirement of the course."

Spanish I will focus on development of the four basic skills of a language: listening, speaking, reading, and writing. Students will be able to describe themselves and others in the Spanish language. Students are given insights into Hispanic culture to increase their awareness of cultural diversity and the various Hispanic customs that exist throughout Spain, Mexico, and Latin America.

Completion of all levels is strongly recommended for students entering the fields of health services, criminal justice, social services, education, business, law, tourism, media, military service, and government.

**Spanish II 302**

- Grade Level: 9, 10, 11, 12 Credits: 1
- World Language Credit
- Career Pathways:

  "A final written and oral exam, which includes a listening, speaking and reading component, is a requirement of the course."

Prerequisite: Spanish I

Spanish II continues to develop the four language skills and concentrates on oral proficiency and further grammar development. Students work in past time and further enhance their understanding of Hispanic culture. Completion of all levels is strongly recommended for students entering the fields of health services, criminal justice, social services, education, business, law, tourism, media, military service, and government.
Spanish III 303
Grade Level: 10, 11, 12
Credits: 1 World Language Credit
Career Pathways:

Periods per Cycle: 6
Length of Course: 90 days
Quality Points - 5 (College Prep)

Prerequisite: Spanish II

A final written and oral exam, which includes a listening, speaking and reading component, is a requirement of the course.

Spanish III further develops the four language skills. The course includes conversational activities and additional grammar, as well as an overview of Hispanic art, culture, and literature. Spanish will increasingly be used for instruction, and students are encouraged to respond in Spanish.

Completion of all levels is strongly recommended for students entering the fields of health services, criminal justice, social services, education, business, law, tourism, media, military service, and government.

Spanish IV 304
Grade Level: 11, 12
Credits: 1 World Language Credit
Career Pathways:

Periods per Cycle: 6
Length of Course: 90 days
Quality Points - 5 (College Prep)

Prerequisite: Spanish III

A final written and oral exam, which includes a listening, speaking and reading component, is a requirement of the course.

Spanish IV refines and enhances the four language skills. Students’ ability to understand and communicate in Spanish will be tested and challenged through daily instruction held almost exclusively in the Spanish language. The course focuses on conversational activities and includes additional grammar, as well as deeper examination of Hispanic art, culture, literature, and geography.

Completion of all levels is strongly recommended for students entering the fields of health services, criminal justice, social services, education, business, law, tourism, media, military service, and government.

AP Spanish Language & Culture 316
Grade Level: 11,12
Credit: 1 World Language Credit
Career Pathways:  

Periods per Cycle: 6
Length of Course: 90 days
Quality Points - 6 Honors/AP

Prerequisite: Completion of Spanish IV and grade of A or B in Spanish IV (or teacher override)

A teacher recommendation and parent commitment form are also required.

The AP Spanish Language and Culture course is a rigorous course taught exclusively in Spanish that requires students to improve their proficiency across the three modes of communication. The course focuses on the integration of authentic resources including on-line print, audio, and audiovisual resources, as well as traditional print resources that include literature, essays, and magazine and newspaper articles with the goal of providing a rich, diverse learning experience. Students communicate using rich, advanced vocabulary and linguistic structures as they build proficiency in all modes of communication toward the pre-advanced level. Students are expected to complete review work prior to the course and attend three review sessions in the spring semester to prepare for the AP exam. Students enrolling in this course should be prepared to devote additional time to study outside of class. Students enrolling in this course should be prepared to devote additional time to study outside of class.

Students enrolled in AP courses are expected to take the AP exam.
German I 305
Grade Level: 9, 10, 11, 12
Credits: 1 World Language Credit
Career Pathways:

A final written and oral exam, which includes a listening, speaking and reading component, is a requirement of the course.

German I will focus on development of the four basic skills of a language: listening, speaking, reading, and writing. Students will be able to describe themselves and others, and express likes and dislikes in the German language. Students are given insights into Germanic culture to increase their awareness of cultural diversity and customs throughout regions of Germany, Switzerland, and Austria. Germany has Europe’s strongest economy, and the language is also useful in many worldwide companies both in the United States and abroad. The complete four-level program is strongly recommended for college-bound students entering the fields of international business and law, the sciences, tourism, military service, and international relations.

German II 306
Grade Level: 9, 10, 11, 12
Credits: 1 World Language Credit
Career Pathways:

Prerequisite: German I

A final written and oral exam, which includes a listening, speaking and reading component, is a requirement of the course.

German II will expand the development of the four basic skills of a language and concentrate on oral proficiency and further grammar development. Students will continue to develop their ability to speak and write in German while simultaneously enhancing their understanding of the German culture. The complete four-level program is strongly recommended for college-bound students entering the fields of international business and law, the sciences, tourism, military service, and international relations.

German III 307
Grade Level: 10, 11, 12
Credits: 1 World Language Credit
Career Pathways:

Prerequisite: German II

A final written and oral exam, which includes a listening, speaking and reading component, is a requirement of the course.

German III further develops the four language skills, as well as, a better understanding of German culture. German will increasingly be used for instruction, and students are encouraged to respond in German. The complete four-level program is strongly recommended for college-bound students entering the fields of international business and law, the sciences, tourism, military service, international relations, and education.
Prerequisite: German III

A final written and oral exam, which includes a listening, speaking and reading component, is a requirement of the course.

German IV refines and enhances the four language skills. Students’ ability to understand and communicate in German will be tested and challenged through daily instruction held almost exclusively in the German language. The course focuses on conversational activities and includes additional grammar, as well as an overview of Germanic art, culture, literature, and geography.

The complete four-level program is strongly recommended for college-bound students entering the fields of international business and law, the sciences, tourism, military service, and international relations.
The Carl D. Perkins Career and Technical Education Act of 2006 requires the development and implementation of career and technical Programs of Study (POS). The Lancaster County Career & Technology Center, under the Act, is now required to offer the relevant academic and technical courses as they relate to the POS. Programs of Study are very similar to, and build on, positive initiatives, such as Tech Prep, career pathways, career academies and career clusters, already underway in career and technical education in Pennsylvania.

Beginning with the class of 2013 priority admissions considerations will be in place for LCCTC programs. These considerations will include submission of an LCCTC application within the designated time period and the student’s successful completion of POS secondary academic courses. These academic courses include:

- 4 Years of College Prep English (4th yr at LCCTC);
- 3 years of College Prep math including Algebra I, Geometry, Algebra II and a higher level math;
- 3 years of science including Biology, Chemistry and Physics or Physical Science; and
- 3 years of social studies including US and World History, with attention given to civic learning.

### “programs of study” secondary scope and sequence

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<td>English 11 CA or American Literature or British Literature or Dramatic Literature</td>
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<td>Geometry or Algebra III or Precalculus/Trigonometry or AP Statistics or Applied Calculus or AP Calculus</td>
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<td>Job Shadowing related to student’s pathway</td>
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<td>Career &amp; Work Standards</td>
<td>Career &amp; Work Standards</td>
<td>Career &amp; Work Standards</td>
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*Health Center Students Only
### Program Offerings

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<td>Electrical Construction Technology</td>
<td>Welding Technology</td>
<td><strong>Consumer Services Center</strong></td>
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<tr>
<td>Heavy Equipment Operation &amp; Basic Maintenance</td>
<td><strong>Construction Technologies Center</strong></td>
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<td>HVAC/R</td>
<td>Residential Carpentry</td>
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<tr>
<td>Painting, Ceramic Tile &amp; Vinyl</td>
<td>Cosmetology</td>
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<td><strong>Information Technology Center</strong></td>
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#### Part Day Programs - Grades 10, 11, & 12

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<tr>
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<td>Grades 10 &amp; 11</td>
<td>Grades 10 &amp; 11</td>
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<tr>
<td>Construction Cluster</td>
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<td>Culinary Cluster</td>
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<td>Health Care Cluster</td>
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#### Full Day Programs – Grade 12

High school seniors spend the day at one of the three Lancaster County Career & Technology Centers, Brownstown, Mount Joy or Willow Street Campus. Students participate in a comprehensive technical or career-oriented program. The full-day program allows more usable time for instruction and enables students to gain insight into daily work patterns. In full-day programs an LCCTC student may earn college credits toward an associate degree at two year colleges. Through partnerships with area colleges, LCCTC provides a variety of dual enrollment courses. The LCCTC also has articulation agreements with 2-year colleges and technical schools. Dual enrollment and articulation offer college-level segments that give students an additional head start toward their future career and life-long learning.

#### Part Day Programs – Grades 10, 11 & 12

Part day programs enable college bound seniors and students in grades 10 & 11 the opportunity to explore different aspects of a career field. The senior part day programs enable students to explore a career area for a few hours during each school day. Since the programs meet for only a part of a day, students can gain technical skills at LCCTC while meeting academic requirements for college at their sending schools. The 10th and 11th grade programs allow students to explore a variety of careers within an occupational cluster and are designed for students who plan to apply for one of the full-time Lancaster County Career & Technology Programs during their senior year.

More information about Lancaster County Career & Technology and its programs can be found at www.lcctc.org. For enrollment and application information, please contact your school counselor.
SOAR programs of study prepare today’s student for tomorrow’s high demand and high wage careers

SOAR is built on programs of study (POS) that incorporate secondary and postsecondary education elements and include coherent and rigorous academic and technical content aligned with Pennsylvania’s challenging academic standards.

SOAR Agreement Articulation for advanced credit transfer is made possible when Perkins-allocated postsecondary institutions and Pennsylvania secondary schools offering SOAR programs agree to the terms and conditions stated in the Perkins Statewide Articulation Agreement.

SOAR Mission

The mission of SOAR is to prepare students for college and careers in a diverse, high-performing workforce.

SOAR Benefits

- Saving Money on College Tuition
- Saving Time by Shortening College Attendance
- Getting on the Right Career Pathway
- Entering the Job Market Ready
- Getting a Consistent Education

SOAR Articulation

SOAR credits are accepted at higher education institutions.

Get The Credit You Have Already Earned

For further information contact:
Bureau of Career and Technical Education
www.education.state.pa.us
Electro-Mechanical Engineering Technology

The Electro-Mechanical Engineering program is designed as a pre-engineering program with an industry driven curriculum developed by leaders in the field. This program combines mechanics, control, electronic and electrical engineering, computer science, and systems design to create useful products. Examples of Electro-Mechanical systems include robots, digitally-controlled combustion engines, and machine tools with self-adaptive tools, contact-free magnetic bearings, and automated guided vehicles. In such systems, software has become an integral part of the product itself, an actual “machine element” necessary for proper function and operation. The Electro-Mechanical Engineering program includes an innovative curriculum. Students will gain knowledge and skills in: blueprint reading, mechanics, pneumatics, hydraulics, electricity, electronics, motors, motor control, programmable logic controls, robotics and motion control, process control instrumentation, and computer integrated manufacturing.

Sheet Metal Technology

This program teaches skills necessary for construction of metal roofing, siding, spouting, welding application, and the layout, fabrication and installation of heating, ventilation and air conditioning (HVAC) ductwork along with other custom applications used in manufacturing and construction fields. In addition to lab work, sheet metal students create HVAC ductwork and flashing work for the student-built house project. The program is nationally certified by the National Center for Construction Education and Research (NCCER) which is recognized by the Associated Builders and Contractors (ABC). Students learn how to set up and operate major fabricating machines, such as shears, brakes, presses, and forming rolls. These machines cut, bend, form or strengthen materials. Sheet metal jobs may require considerable bending, lifting, standing and squatting. Workers need good hand-eye coordination, manual dexterity and measurement skills, plus the ability to visualize three dimensional projects.

Welding Technology

Welders apply intense heat to metal pieces to join, melt and fuse them to form a permanent bond. Students in the program learn the techniques of Oxyfuel, Arc, Mig and Tig welding processes necessary for a variety of construction and repair projects such as building bridges, automobiles and other manufactured products. The Welding Technology program is nationally accredited by the American Welding Society (AWS/SENSE) and introduces students to both welding and cutting. Welders and cutters need manual dexterity, strength to lift heavy objects, measurement skills, good eyesight and hand-eye coordination. They should be able to concentrate on detailed work for long periods and be able to bend, stoop and work in awkward positions.

Agriscience Center

Large Animal Sciences

This program introduces students to the exciting and dynamic Agriscience industry while preparing them with the knowledge, hands-on training, and technical skills to successfully enter the career ladder in production animal science. The program covers topics including anatomy and physiology, reproduction, veterinary care, handling and restraint, nutrition, agriculture law compliance, biosecurity, genetics, and laboratory procedures. Students in this program will have the opportunity to do both theory in the classroom and hands-on education in the lab and on curriculum trips. Students will be exposed to cows, horses, sheep, goats, alpacas, and poultry. There is a demand for skilled workers with a strong work ethic. Graduates will have employment opportunities in the expanding and diverse field of large animal sciences.

Veterinary Assistant

The program combines classroom theory and laboratory experience on topics including small animal veterinary care, surgical assisting, laboratory testing, cleaning and feeding techniques. A career as a Veterinary Assistant encompasses all parts of veterinary medicine and assists Veterinary Technicians and Veterinarians in the care of animals. Common duties would include animal restraint, receptionist tasks, surgical assisting, setting up for laboratory procedures, grooming, exercising animals and cleaning. Students learn hands on skills with dogs and cats. Graduates could obtain employment in veterinary hospitals, animal training facilities, boarding kennels, grooming parlors or any business that houses or cares for animals. This program has an affiliation with the Lancaster Humane League and they perform low cost spay and neuter surgeries for the public once a week. This is the only program in the state that has students practicing surgical assisting tasks on a weekly basis. The demand for trained veterinary assistants has steadily increased over the past decade and this growth is expected to continue.
Architectural CAD – Design
The Architectural CAD–Design program offers a foundation of basic CAD (Computer-Aided Drafting) skills and knowledge, preparing students to attend a two or four-year institution of higher learning or to begin a career as an entry level drafter and/or CAD operator. Students learn techniques through a self-paced program of instruction that includes instruction in AutoCAD software and other architectural concepts. Architectural draftspersons prepare accurate architectural working plans, cross-sections and details for engineering drawings. They may be required to make mathematical calculations, and to estimate both the quantity and cost of materials needed for a project. The program content consists of detailed instruction in basic house design, room planning, floor plans, elevations and preparation of working drawings and details.

Commercial Construction/Management
The Commercial Construction and Management program offers students the opportunity to gain skills and knowledge for entry-level employment in the commercial/industrial construction field. The skills are acquired through a unique blend of theory, lab, and job site experiences. The program is certified by the National Center for Construction Education and Research (NCCER) and is recognized by the Associated Builders and Contractors (ABC). It includes instruction in and hands-on application of power tool operation, blueprint reading and layout, site preparation, concrete, framing with metal and wood, building design, interior finishes, exterior finishes, estimating and purchasing procedures. Additionally, the curriculum offers the Occupational Safety and Health Administration (OSHA) ten hour safety training, Hilti Powder Actuated Fastener certification, Hydromobile Scalding certification, JCB backhoe training, and construction fork truck training.

Electrical Construction Technology
The Electrical Construction Technology program is recognized by the Associated Builders and Contractors (ABC) and taught by a certified National Center for Construction Education and Research (NCCER) instructor. The program prepares individuals for employment in today’s residential, commercial and industrial electrical industries. Instruction includes electrical principles and theory, residential and commercial wiring, electrical maintenance, basic motor control systems and transformers. Electricians install, connect, test and maintain electrical systems for a variety of purposes. Electricians follow the requirements of the National Electrical Code (NEC) specifications and procedures. Students learn these guidelines and how to navigate the NEC. Excellent reading and math skills are necessary, as well as good eyesight with normal color vision to distinguish color codes on wires.

HVAC/R
From furnaces to refrigeration units, systems that control heating, ventilation, air conditioning and refrigeration are important components of today’s residential, commercial and industrial buildings. The HVAC/R program prepares students to install, repair and maintain this equipment. The program is nationally certified by HVAC Excellence and by the National Center for Construction Education and Research (NCCER), and is recognized by the Associated Builders and Contractors (ABC). Curriculum studies include: HVAC equipment line voltage circuits, 24-volt control circuits, electric schematics, air distribution and duct work, air conditioning, heat pumps, electric heat, gas heat, oil heat, hydronics and blueprint reading. Lab includes basic HVAC industry entry level skills of the following: electric circuits, soldering, brazing, black iron piping, sst piping, sheet metal duct, basic fiberglass duct, air conditioning, heat pumps, gas furnaces, oil furnaces, boilers. Employees in this field need a strong mechanical aptitude, and solid reading and math skills are needed to understand technical manuals.

Masonry
From a simple walkway to the ornate exterior of a high-rise building, masons use a variety of materials to create durable surfaces and structures. The Masonry program combines classroom training and job site experience so that upon graduation, students should perform at a level equivalent to a masonry apprentice with six months of experience. The program is certified by the National Center for Construction Education and Research (NCCER) and recognized by the Associated Builders and Contractors (ABC). Students receive instruction in laying concrete block and brick, composite walls, chimneys and fireplaces, landscaping, paving, setting tile, stone work, drywall, plaster, stucco and concrete pouring finishing. Other topics include the different types of mortar mixes, their strength and uses, reinforcement of masonry walls, masonry cleaning, weather protection for masonry, and estimating supplies and materials. Masons stand, kneel and bend for extended periods of time and often lift heavy materials overhead.

Painting, Ceramic Tile & Vinyl
This program teaches the basics of residential, commercial and industrial painting and flooring. Lessons include fundamentals of color theory, using tools, estimating material amounts, using scaffolding and ladders, reading blueprints. The program is certified by the National Center for Construction Education and Research (NCCER) and is recognized by the Associated Builders and Contractors (ABC). The curriculum covers various painting/finishing techniques including exterior and interior painting, wood finishing and spray painting. Instruction in wall covering installation includes preparing drywall and hanging wallpaper around doors, windows, inside and outside corners, and archways. Students learn how to apply finishes to both antique and new furniture. Flooring lessons include the installation of ceramic tile and vinyl. Students use a wet saw, tile cutter and trowels to prepare and lay ceramic tile for floors, countertops, backsplash, tub surrounds and shower stalls. Work in this field requires bending, kneeling, crawling, working on ladders and the flexibility to maneuver in confined areas.
Plumbing
The high-paying field of plumbing involves the installation and repair of water, drainage, waste disposal and gas systems in residential, commercial and industrial buildings. Plumbers also install fixtures, such as bathtubs, sinks and appliances including dishwashers and water heaters. The Plumbing program is certified by the National Center for Construction Education and Research (NCCER) and recognized by the Associated Builders and Contractors (ABC). The program covers blueprint reading, residential systems, fixture and equipment installation, system maintenance, repair and troubleshooting. Other areas include plumbing rough-in, PVC and metal piping, water heater service and system installation, system performance, estimations, soldering, drain line work and using trade tools and equipment. Students acquire job site experiences, such as installing plumbing in residential and commercial buildings, as part of their training. The class is responsible for the installation of all plumbing systems in the new house construction project, including gas mains, water mains, sewer lines and fixtures.

Residential Carpentry
Our Residential Carpentry class encompasses a wide variety of skills necessary for employment as a Carpenter Apprentice. With an emphasis on personal safety, students are trained to read a blueprint, make precise measurements, estimate materials and do rough framing. They will also learn to use power tools, do exterior and interior finishing, concrete forming, roof framing, hardwood floor installation and stair construction just to name a few. Seniors are given the opportunity to apply their hands-on knowledge at an off-campus job site where, under careful supervision, they will participate in residential renovation and construction using the latest green technology. On completion of projects, students are asked to focus on the accuracy of their work. Our program is recognized by the Associated Builders and Contractors (ABC) and certified by the National Center for Construction Education and Research (NCCER).

Cosmetology
Although styles and fashions change from year to year, the work of cosmetologists remains the same — helping people to look their best. Cosmetology, offered at the Mount Joy and Willow Street Campuses, teaches techniques in the art of hair, nail, and skin care. Instruction covers shampooing, hair styling, permanent waving, coloring, chemical hair relaxing, skin care, manicuring, temporary hair removal, scalp treatment, make-up analysis and care of all hair types and textures. Students must complete 1250 hours of instruction before they are eligible to take the State Board of Cosmetology licensure examination. In order to obtain 1250 hours, high school seniors are required to complete their training by enrolling in a cosmetology program at LCCTC for completion during the summer after their senior year.

Early Childhood Education
This program is designed to train and prepare students for employment in the early learning field and provides the foundation for study in higher education. Early Childhood students receive hands-on experiences at the state-of-the-art Early Learning Center located on the Mount Joy campus, at the on-site Head Start program, and at a local elementary school. A graduate of this program who meets the requirements can qualify as an assistant group supervisor in Early Learning centers throughout Pennsylvania. In addition, students can prepare for the nationally recognized Child Development Associate credential. The students study all phases of child development: physical, social, emotional, and intellectual. Instruction is provided in health, safety, development, learning environments, guidance, classroom management, and observation and learning activities. This program's curriculum is aligned with several college courses at local post-secondary schools. This allows students to earn college credits towards degrees in related occupations, such as: Elementary Education, Early Childhood Education, and Human Development and Family Studies.

Baking and Pastry Arts
The Baking and Pastry Arts program is equipped with the same state-of-the-art tools and machines used in industry settings. The program teaches the functions of ingredients in products, recipe conversions, sanitation, equipment safety and proper food handling. Students gain experience by preparing desserts, pastries and breads, which are sold or served in the Culinary Arts Center restaurant and store. Some of these products include tortes, flans, chocolate specialties, Danish, puff pastries, pies, mousses, specialty cookies, sauces, custards, puddings, icings and a wide variety of both breads and decorated cakes.
Culinary Arts/Chef
In the Culinary Arts/Chef program, students learn how to prepare soups, sauces, meat entrees, vegetable dishes, salads and dressings as well as herb and spice identification. Students prepare menu items ranging from local favorites to classical and international cuisine. Other areas covered include fresh pasta preparation, fabrication of beef, pork and poultry, seafood identification and preparation, appetizers, desserts, plate presentation, garnishing, beverage creation, and restaurant service. Course work also includes purchasing, inventory, menu planning, nutrition, recipe costing and customer service. A major emphasis is placed on sanitation and use and care of kitchen equipment. A pleasant attitude and neat appearance are important when dealing with customers. Individuals need stamina to stand for long periods of time, excellent hand-eye coordination and a keen sense of taste and smell. Students will participate in a variety of serving techniques ranging from beverage service to in room dining to fine dining. An array of customer service skills and techniques will also be evaluated and practiced by each student.

Event Planning & Tourism Services Management
This program takes a first-hand look at the fast-paced and exciting careers in hospitality. Students in this program will receive academic instruction and work experience that reflects industry standards for jobs within the hospitality, event planning and lodging industry, and gain work experience at a local lodging property. Students in this program will learn an overview of lodging management, leadership and management skills, reservations, front desk, housekeeping, marketing and sales, event coordination, and food and beverage service. When students graduate, they will be ready to begin their hospitality career or continue their education at a college or university.

Clinical Care Assistant
This challenging program prepares students to work as nursing assistants in acute care settings (Hospital, Home Health Agency, Physician Office). A nursing assistant provides direct patient care while utilizing technical skills in tasks assigned by a registered nurse. This individual completes and documents patient care activities. This program is certified by the National Health Career Association (NHA). The curriculum includes medical terminology, anatomy and physiology, medical law and ethics, math, nutrition, growth and development, critical thinking skills, pathophysiology, bedside care, personal care, ECG, phlebotomy, emergency skills, home health aide skills, and medical assisting skills including front office skills. This theory-intensive program includes a significant amount of reading from college level textbooks. The physical ability to move patients, excellent hand dexterity, and good hand-eye coordination are a must. This program offers a clinical internship in a hospital setting, preparing students for nursing programs and other health care careers.

Dental Assistant
The Dental Assistant program integrates lectures, demonstrations and hands-on experiences to teach students a variety of dental-related subjects. The major areas of study include anatomy and physiology, chairside dental assisting, radiology, dental materials and microbiology/sterilization. The program also covers pharmacology, oral pathologist, dental anatomy, computer introduction, medical/dental emergencies, dental office business procedures, legal/ethical management and communications. During the second half of the year, students participate in clinical rotations in private dental offices, clinics and hospitals. Experience gained in the Dental Assistant program prepares students to take the Dental Assisting National Board in Dental Radiology Health and Safety required by the Commonwealth of Pennsylvania. The program's textbook is written on a college level, requiring that students entering the program possess excellent reading/comprehension skills. The coursework is a stepping stone to furthering your education as an EFDA, Dental Hygienist or Dentist.

Medical Administrative Assistant
This program prepares students to serve on a healthcare team in the administrative role. A Medical Administrative Assistant requires medical knowledge, organizational and business skills, communication skills, and the ability to meet accepted performance standards of health care workers. The program includes medical terminology with abbreviations, anatomy and physiology, disease processes, law and ethics, medical transcription, insurance procedures, coding, billing, collections, medical records, and electronic medical records. Administrative skills include appointment scheduling, phone technique, filing medical records, maintaining electronic medical records, typing medical reports, filling out insurance forms, banking duties, computer skills, and many other administrative procedures. The program textbooks are written on a college level, so students need excellent reading skills. Students should have basic computer and keyboarding skills upon entering the program. Qualifying students participate in an eight-week externship at a physician's office, hospital, clinic, insurance company, laboratory, pharmaceutical company, etc.
Medical Assistant
Medical assistants are professional, multi-skilled individuals who perform administrative and clinical duties in health care settings. The program includes studies in anatomy and physiology, health insurance coding and billing, medical math, medical terminology, medical law and ethics, pharmacology, clinical and administrative skills. In addition, curriculum includes clinical skills such as phlebotomy, laboratory tests, minor surgical procedures, medication administration and performing electrocardiograms. During the fourth making period, students who have successfully completed program requirements may participate in a six-week clinical experience in a physician's office. The National Health Career Association (NHA) participates with the program to allow medical assistant students to receive certification through this agency. Students who participate in clinical may be eligible to sit for the exams to become certified as a clinical medical assistant, administrative medical assistant, phlebotomist and/or EKG technician. Students planning to pursue further health care training after high school should take the SAT or ACT testing during their junior year.

Nursing Assistant/Home Health Aide
This rewarding program prepares students to work as nursing assistants in long-term care facilities and/or as an aide in the home care environment. A nursing assistant provides direct patient care while utilizing technical skills in tasks assigned by a licensed nurse in the long term care setting. Nursing assistants complete and document patient care activities. This course is approved by the Pennsylvania Department of Education. This course will offer CNA training as well as Home Health Aide training. The curriculum includes medical terminology, anatomy and physiology, legal aspects of health care, math, nutrition, growth and development, critical thinking skills, pathophysiology, and bedside care, as well as home health care. The physical ability to move patients, good hand-eye coordination, dependability, and compassion are required. This program offers students the ability to participate in clinical rotations at long-term care facilities. After clinical completion students are eligible to take the Red Cross certification test. Additional certifications include: American Heart Association First Aid, and Personal Care Home/Direct Care Staff Certification, American Heart Association Healthcare Provider CPR.

Computer Systems Technology
Computer Systems Technology includes courses in CompTIA A+ and Network+. In the A+ course, students learn about computer hardware and software such as motherboards, hard drives, operating systems, printers, customer service and troubleshooting in preparation for the CompTIA A+ certification exams. In the Network+ course, students learn advanced networking skills such as subnetting and routing in preparation for the CompTIA Network+ certification exam. Once these courses have been mastered, various vendor-specific product certifications may be taken in order to give the student more specific skills, such as AMP/Tyco cabling certification. Students acquire an in-depth understanding of the planning, installing, configuration and maintenance of computer systems. Instruction includes knowledge of server-level hardware implementations, data storage and data recovery. The program follows standards set forth by CompTIA, AMP/Tyco, and CISCO.

Emergency Medical Services
This full-day program is offered at the Lancaster County Public Safety Training Center and is designed to prepare students for careers in emergency medical services. Students will acquire the skills to recognize acute injuries of the sick and injured, and to assess and manage medical emergencies in the pre-hospital field settings. Program instruction includes EMT-Basic, CPR, clinical experience/internship, anatomy and physiology, and professional standards and regulations. Health service career opportunities continue to grow and expand in the labor force of Lancaster County, the State, and the Nation. Two of these rapidly growing occupations are emergency medical technician and paramedic. As a graduate of the program, individuals may gain PA EMT-B certification, entry-level employment, or continue to post-secondary education.

Fire Protection
The program is offered to students as a full-day program and prepares individuals to perform the duties of a firefighter. It includes instruction in firefighter health and safety, fire-fighting equipment operation and maintenance, principles of fire science and combustible substances, methods of controlling different types of fires, fire rescue procedures, vehicle and machinery rescue procedures, rope rescue procedures, highway incident safety, public relations and applicable laws and regulations, leading to national certification as a Firefighter I. In addition, students will receive intensive instruction in emergency medical care leading to EMT certification by the PA Department of Health. The course prepares individuals to apply the knowledge and skills of fire prevention and control necessary for saving lives, reducing fire risk, limiting fire loss, supervising substance removal, conducting fire investigations, and advising on matters of safety procedures and fire prevention policy.
Law Enforcement, Corrections, & Security

This fulltime program prepares students for employment in the fields of law enforcement, corrections, private security, and military police. Instruction covers the crimes code, vehicle code, constitutional law and principles, rules of criminal procedures, arrest procedures, interviewing and interrogation techniques, private security subjects, correctional officer training, and police/security radio communication. Students also study and/or receive certification in the following areas: lifting latent prints and fingerprinting; police baton training; searching and frisking techniques; handcuffing techniques; physical fitness training and testing; self-defense training; Hazardous Materials Operations level certification; fire extinguisher operations/handling; vehicle rescue; ropes and rigging; EMT-B, and Professional Rescuer CPR and AED; NIMS (National Incident Management System); and building fire safety. Before starting a career, candidates must receive and maintain (to legally mandated established levels) criminal history and child abuse clearances, along with a psychological evaluation and test. Students are encouraged to pursue post-secondary training and/or education beyond the program in order to be competitive in the job market.

Automotive Mechanics

This program trains students in the basic operation, diagnosis, and repair of various vehicle systems. Using information systems and testing equipment on late model vehicles, students gain skills that enable them to earn the Pennsylvania State Inspection license. The program is certified by the National Automotive Technicians Education Foundation (NATEF). Curriculum covers fundamental service and repair practices, electrical system service, tool identification, brakes, steering, and suspension. Additional topics include engine mechanical performance, ignition and computer-controlled systems, tire maintenance/balancing/alignment, and fuel management. Written tests prepare students for ASE certification. Qualified students may participate in the Cooperative Education Program and an Advanced Placement Internship (API). Cooperative Education and Advanced Placement Internship (API) allows students to work side-by-side with an experienced technician at a local repair facility.

Automotive Technology

With each new model year, automobile systems become more sophisticated. The Automotive Technology program prepares students for entry-level dealership or Independent shop employment and to continue their training at a post-secondary school. The National Automotive Technicians Education Foundation (NATEF) has certified this program in four areas: brake systems, steering and suspension, electronics/electricity, and engine performance. In addition to these areas, the program includes instruction in automotive fundamentals, customer relations, engine management systems, and Pennsylvania State Inspection and Emissions Inspection procedures. Qualified students may participate in the Auto YES Program (Automotive Youth Educational Systems). This intensive program allows students to continue to learn technical skills as they work side-by-side with an experienced technician at a local dealership. Points on a student’s driver’s license may prevent him/her from being hired by dealerships as a new technician.

Collision Repair

Motor vehicle accidents occur frequently, and while some vehicles are damaged beyond economical repair, most receive only minor damages. Collision Repair Technicians examine these damages and use tools to straighten bent vehicle bodies, remove dents and replace parts so that vehicles operate properly and look like new. The Collision Repair program trains students in this field, covering areas such as safety, estimating, hand and power tool usage, frame repair, body alignment, refinishing, and customer relations. Curriculum also includes metal straightening, mig welding, metal cutting, glass and accessory service, measurement, panel replacement and alignment, servicing doors, surface preparation, cosmetic repairs and the selection of automotive paint finishes. Collision repair requires good color discrimination capabilities, excellent eye-hand coordination, stamina to stand for long periods of time, and a good understanding of measurement and ratios. Qualified students may participate in the Auto YES Program (Automotive Youth Educational Systems). This intensive program allows students to work side-by-side with an experienced technician at a local dealership.

Diesel Equipment Technology

As the diesel equipment industry continues to expand, the demand for mechanics and technicians to repair and maintain diesel equipment grows. The program instructs students in personal and workplace safety practices, tools, measuring devices and fasteners, basic engine principles, preventive maintenance and inspection. Study also includes electrical and electronic systems, truck brake systems, suspension and steering systems, and diesel engine rebuilding. The program is NATEF (National Automotive Technicians Education Foundation) certified in the following areas: diesel engine, brakes, electrical/electronic systems, preventive maintenance inspection, suspension and steering. Mechanics and technicians require a driver’s license and a clean driving record. Due to federal regulation, mechanics must undergo drug and alcohol testing when hired and be able to pass random drug and alcohol testing even after continued employment. Qualified students may participate in the API Program (Advanced Placement Internship) and/or cooperative education. The intensive API program allows students to work side by side with an experienced diesel technician.

Heavy Equipment Operation & Basic Maintenance

This program is designed to provide students with the technical and job-related skills to work in the field of heavy equipment operation and maintenance. Students learn skills that prepare them to be heavy equipment operators for excavation and construction. When weather conditions permit, students practice their operation techniques at a training site. Skills are relevant to excavation, site layout, use of transit/laser/hand levels. The program is certified by the National Center for Construction Education and Research (NCCER) and recognized by the Associated Builders and Contractors (ABC) and also the Associated Pennsylvania Construction Contractors. The course and its curriculum have been developed in conjunction with the Pennsylvania Department of Transportation.
RV & Outdoor Power Equipment
From lawn and garden equipment, such as lawn mowers, lawn and garden tractors, chain saws, leaf blowers, and string trimmers, to vehicles such as motorcycles, dirt bikes, 4-wheelers, and snowmobiles, small engines power many machines that make our lives more fun and convenient. The RV and Outdoor Power Equipment program offers both classroom and lab experience in all phases of repair and maintenance work on outdoor power equipment and recreational vehicles. The program is nationally certified by the Equipment and Engine Training Council (EETC); Outdoor Power Equipment (OPE). It provides instruction and practice in the areas of diagnosis of malfunction, four and two-stroke engines, disassembly of engines, examination of parts, and reassembly of engines, hydrostatic and manual drive units and state inspection. Study includes various systems including fuel, electrical, lubricating, governing, steering, suspension, and braking systems. Students use an assortment of technical manuals, testing and diagnostic equipment, hand tools and power tools. During the school year, students have the opportunity and training to take EETC exams and the PA State Inspection written and performance tests for motorcycles.

Commercial Art
The Commercial Art program is designed to introduce students to necessary tools and skills that will help advance their training in Graphic Design, Illustration, Web Design, Fashion/Interior Design, Advertising Art Direction, Animation, and Film. The Commercial Art program stresses craft, concept and professionalism. The program focuses on traditional board work, layout composition, illustration, elemental photography and production art. Program coursework continues with training on Apple® workstations and Adobe® Creative applications as students study computer graphics, typography and production basics. Students entering the Commercial Art program should have a background in several types of art with at least basic computer experience. Drawing ability, creativity, color keenness and the ability to sit at a workstation for extended periods of time, while meeting strict deadlines, are necessary aptitudes. The Commercial Art program is an excellent prelude to advanced post-secondary training at both colleges and art schools. It allows students to prepare an extensive portfolio and even obtain college credit with participating post-secondary schools.

Digital Design/Print Media
This program provides a comprehensive approach to the printing industry. From the beginning concept to final product, students take print jobs through the entire production process from electronic files to complete prepress, through offset, digital, screen and other printing processes and professional finishing. This program provides a national certification for all students through the Graphic Arts Education and Research Foundation (PrintED/GAERF). Through this comprehensive exploration of graphics and desktop publishing, students cover the fundamentals of page layout, job work flows to digital printers, CTP platemaking, offset press operation and finishing operations in addition to the repurposing of digital information using the Adobe® Creative Suite for the visual communications industry.

Photography & Digital Imaging
The Photography and Digital Imaging program has a carefully structured curriculum that allows students to gain real world experience in digital media while encouraging students to specialize in the medium of their choice. Students begin their photographic education by developing an understanding of aperture, ISO, shutter speeds, focal length and depth of field. Students enrolled in this course will gain competency in capturing and producing photographs, using several different digital image file formats (JPG, TIF, RAW). Each individual student will acquire the knowledge to properly prepare and produce digital files, using postproduction software along with the printing of a finished product. The use of different lighting techniques will be taught using both traditional hot lights along with Commercial Studio Strobes. Successful students will acquire and show a formal knowledge of photography through the production and presentation of their own portfolio at the end of the course, along with designing and making their own logo, business card, letterhead and resume.

Construction Cluster
The Construction Cluster is a half-day, foundational program, which introduces students to careers in the construction industry. Students receive basic instruction in carpentry and construction practices, painting and finishing, electricity, masonry, and plumbing. This program is open to students in grades ten or eleven who plan to apply for admission into one of the full-day senior programs in the Construction Technologies Center. In addition to learning basic skills related to the construction trades, students learn the basics of hand and power tools, power equipment, blueprint reading, and trade-related math. The program offers students exposure to site work, concrete forming, rough framing, exterior and interior finishing, energy conservation, drywall installation, residential and commercial painting, and wood finishing. Students are also exposed to basic electricity and plumbing. Masonry instruction includes the development of clay and shale brick and concrete block, paving with masonry materials, and preparing and pouring concrete. This program stresses problem solving and employability skills necessary for career success.
Culinary Cluster
Culinary Cluster is a half-day foundational program of study which introduces students to the culinary related career areas of cooking, baking, restaurant service techniques, and the hospitality industry. This program is offered to students in grades ten or eleven who plan to apply for admission into one of the full day senior programs at the Culinary Arts Center located at the Mount Joy Campus. Students learn baking techniques by preparing quick breads, cakes, pies, and cookies. Students also learn basic cooking methods, breakfast preparation, soups, salads, sandwiches, fast foods, stocks, basic meat cutting, and the presentation of food. Students also learn retail skills by selling foods that they prepare in class. Working in the food service industry requires excellent hygiene and an emphasis on safety and sanitation (lab cleanup). For success in the Culinary Cluster, an individual must have excellent hand-eye coordination, good arithmetic skills to measure ingredients accurately, the ability to work quickly, strength to lift heavy pots and pans, ability to work with others, and the stamina to stand for long periods of time.

Health Care Cluster
The Health Care Cluster program is a foundational program offered on a half-day basis to students in grades ten or eleven. This program is extremely valuable for students who want to pursue a career in the health care field and is especially important for those who are trying to decide which health career path to select. The program is intended for students who plan to apply for a full-day Health Care Center program for their senior year of high school. Many health careers involve direct interaction with patients, which requires excellent communication skills. Health care professionals typically work as part of a team to provide care. They must pay close attention to details to ensure the good health of their patients. Students learn basic clerical and clinical skills. They study anatomy and physiology, medical terminology, medical law and ethics, history of health care, effective teamwork, communication skills, health care financing, and health care safety.

Introduction to Health Careers
The Introduction to Health Careers Program at the Lancaster County Career & Technology Center is a half-day academic program for seniors, allowing students to attend both the LCCTC and their sending high school to fulfill college preparatory academic requirements. The program gives students an overview of the health care system and an introduction to health care careers. Through an affiliation with Harrisburg Area Community College, the College in the High School program provides students the opportunity to earn six college credits, transferable to a college of their choice. A unique feature of the program is that health care professionals from the Lancaster Regional Medical Center, Ephrata Community Hospital, The Heart of Lancaster, Lancaster General Suburban Outpatient Pavilion, Schreiber Pediatrics, Lancaster Cancer Center, Susquehanna Valley Emergency Medical Services, and other health/medical facilities provide job shadowing opportunities and career information. Classroom instruction includes anatomy, physiology, medical terminology, medical law, ethics, history of health care, health care economics and safety. Classroom activities and job shadowing provide practice or observation in core skills required in a clinical setting. Students must have excellent reading skills and a good foundation in algebra, chemistry and biology.

Manufacturing Cluster
The Manufacturing Cluster program is a foundational program offered on a half-day basis to students in grades ten or eleven. The program focuses on necessary core metalworking skills and prepares students for admission into one of the full-day senior programs at the Advanced Manufacturing Center at the Mount Joy Campus. Students gain useful knowledge of hand tools and machine tools and learn a variety of metal forming processes. The program is designed to allow students the opportunity to explore employment possibilities in metalworking. Students investigate three areas of study, including electro-mechanical engineering technology, sheet metal fabrication, and welding. In the electro-mechanical engineering technology phase, students gain experience in basic maintenance and repair, electronics, and sensor technology. The sheet metal fabrication phase introduces students to various skills used in the layout, cutting, forming, and joining of sheet metal. Skills gained in this area are used in employment as a sheet metal mechanic working in roofing, siding, spouting, HVAC ductwork, and custom metal fabrication. The welding phase provides basic training in tig, mig, oxyacetylene, and electric arc welding, which may lead to employment in industrial fabrication, custom welding applications, and repair work.

Transportation Cluster
The Transportation Cluster is a half-day foundational program of study designed for students in grades ten or eleven who plan to apply for a full-day Transportation Technologies Center program at the Willow Street Campus during their senior year. Instructors combine classroom training and hands-on experiences to prepare students in three areas related to transportation: auto mechanics, diesel mechanics, and small engine mechanics. The study of auto and diesel mechanics covers electrical, cooling, exhaust systems, tires and wheels, seals and gaskets, and preventive maintenance. During the small engine curriculum, students learn disassembly of engines and examination of parts, reconditioning and replacement of parts, diagnosis of malfunctions, and adjustment and repair of fuel systems. All three areas include safety instruction, identification, use of hand and power tools, and use of various fasteners. This program is designed as an entry-level, preparatory program, which has been developed specifically to provide students with the basic skills needed to apply for admission to one of the LCCTC full-day Transportation Technologies Center senior programs and give students skills they will use for their entire life.

Visual Communications Cluster
The Visual Communications Cluster program is a foundational program offered on a half-day basis to students in grades ten or eleven. This program is extremely valuable for students who want to pursue a career in the visual communications field. Students explore and learn specific skills related to a variety of visual communications careers. It is especially important for those who plan to apply for a full-day Visual Communications Center program at the Brownstown Campus during their senior year of high school. Students learn visual and graphic design basics, web design principles, desktop publishing, electronic imaging, color theory, basic drawing, typography, plate making, offset press operation, bindery, pre-press procedures, photography, video-editing and production. This program is designed as an entry-level, foundational program, which has been developed specifically to provide students with the basic skills needed to apply for admission to one of these LCCTC full-day senior programs: Commercial Art, Digital Design/Print Media, or Photography and Digital Imaging.