

# Eastern Lebanon County High School

180 ELCO Drive, Myerstown, PA 17067 www.elcosd.org

# 2024-2025 Educational Planning Guide



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ELCO High School Students and Parents/Guardians,

Each new school year brings new opportunities for student growth and success. The opportunities afforded by the High School's course offerings and master schedule provide students with the structure necessary to support their success in core academics while providing the flexibility to explore their interests across a wide range of subject areas. ELCO High School provides students with many educational opportunities to be ready for college, career, and life by enabling students to study in the areas of agriculture, art, business and technology, family and consumer science, music, technology education, wellness, and world languages in addition to the core academic areas of English, Mathematics, Science, and Social Studies. Further, graduation requirements allow students flexibility to tailor their courses to their individual interests and goals and to thrive in their chosen course of study.

One of the most important decisions high school students encounter is the selection of courses for the following school year. The courses students select guide their futures and should be based on careful consideration of students' goals, skills, interests, and abilities as well as their intended career field. Course selections should reflect students' post-secondary goals and be grounded in the career cluster that matches their future plans.

Students, as you embark on the course selection process, use the available resources and consult with your parents, teachers, and school counselor to determine the appropriate combination and fit of courses for you. Carefully consider your academic record in determining the appropriate placement in courses and be willing to challenge yourself. The breadth of course offerings stives to provide equitable opportunities for achievement. High school provides the opportunity not only to prepare for your future but also to explore and develop your individual interests and abilities. Be willing to take risks and investigate areas of potential interest.

This *Educational Planning Guide* contains the answers to most of the questions pertaining to the process of requesting courses and developing your schedule for the following school year. Read all of the information carefully. The *Educational Planning Guide* outlines course requirements and provides an overview of each course and the opportunities that are available to you, including program offerings at the Lebanon County Career and Technology Center. The *Educational Planning Guide* also highlights five Career Pathways, which are intended to help guide you through your course selections as they relate to your career goals. Explore the Career Pathways and plan your course selections based on your future aspirations.

If you have questions at any point in the process, contact the school counselors or administrators and we will be happy to help you.

Sincerely,

Jennifer Haas, High School Principal

#### ELCO Mission, Vision, and Shared Values

#### OUR PROMISE...

We educate for excellence ...

Empowering every student to be academically curious, emotionally intelligent, and actively engaged to discover their passions and contribute constructively to society.

#### OUR VISION...

Educating for Excellence

#### **OUR MISSION...**

The ELCO School District cultivates inspired and innovative learners in an environment that is safe, responsive to individual needs, and built on a foundation of educational excellence and integrity.

#### **OUR SHARED VALUES...**

#### We are family

Every learner, staff member, family, and community member of the ELCO School District belongs to the ELCO family.

#### We honor relationships

Knowing each learner by name, strength, and need honors relationships.

#### We believe in unlimited potential

Cultivating inspiration and innovation in an environment of excellence is the foundation of accessing our learners' unlimited potential.

#### We build the future

Engagement in a rigorous academic curriculum provided by dedicated and distinguished faculty will foster the development of innovative, connected, and responsible learners prepared to be constructive contributors and engaged citizens in a complex society.

#### We are ELCO Strong

When we work together, utilizing the skills, talents, and abilities of each other, we can achieve incredible accomplishments and soar to new heights never realized before because we are better together.

#### **Statement of Equal Opportunity**

The Eastern Lebanon County School District is an equal opportunity educational institution and will not discriminate on the basis of race, color, national origin, sex and handicap in its activities, programs or employment practices, as required by Title VI, Title IX and Section 504. For information regarding civil rights or grievance procedures, contact Mrs. Amy Shoemaker, Title IX Coordinator, 180 ELCO Drive, Myerstown, PA 17067. Email: <a href="mailto:ashoemaker@elcosd.org">ashoemaker@elcosd.org</a> Phone: (717) 866-7117.

#### Directory

Ms. Jennifer S. Haas High School Principal

Mr. W. Scott Breeden High School Assistant Principal

Mr. J. Thomas Eberly High School Counselor (Last Names O-Z)
Mrs. Erica Long High School Counselor (Last Names H-N)
Mr. John Mentzer High School Counselor (Last Names A-G)

#### Acknowledgements

The instructional program described in this *Educational Planning Guide* is the result of the collaboration and professional expertise of the ELCO High School faculty and curriculum coordinators. The list of names below is to recognize and acknowledge those individuals who directly contributed to the development of the *Educational Planning Guide*.

J. Thomas Eberly - School Counselor

Erica Long - School Counselor

John Mentzer - School Counselor

Amy Shoemaker - Director of Pupil Services

Matthew Babiarz - Physical Education Department Chairperson

Zachary Cook - Social Studies Department Chairperson

David Fair - Music Department Chairperson

Christopher Heft - Science Department Chairperson

Gina Hewitt - World Language Department Chairperson

Wendy Kerst – Library Sciences Department Chairperson

Kenneth Miller - Agriculture Science & Technology Ed. Dept. Chairperson

Elizabeth Phillips – Family & Consumer Science Department Chairperson

Taryn Showalter - Art Department Chairperson

Michael Simmons - Math Department Chairperson

Amanda Templeton - English Department Chairperson

Amy Weddle - Business/Computer Department Chairperson

#### Graduation Requirements (Classes of 2025, 2026)

Subject Area	Credits Needed
English	4
Social Studies	3
Mathematics	3
Science	3
Physical Education, Health,	2
Driver's Ed, Freshmen Seminar	PE 9 = .25; Freshmen Seminar = .25; Health = .25; Driver's Ed = .25; PE = .5; PE = .5
Courses of Choice	7
Total Credits	22

#### Graduation Requirements (Classes of 2027, 2028)

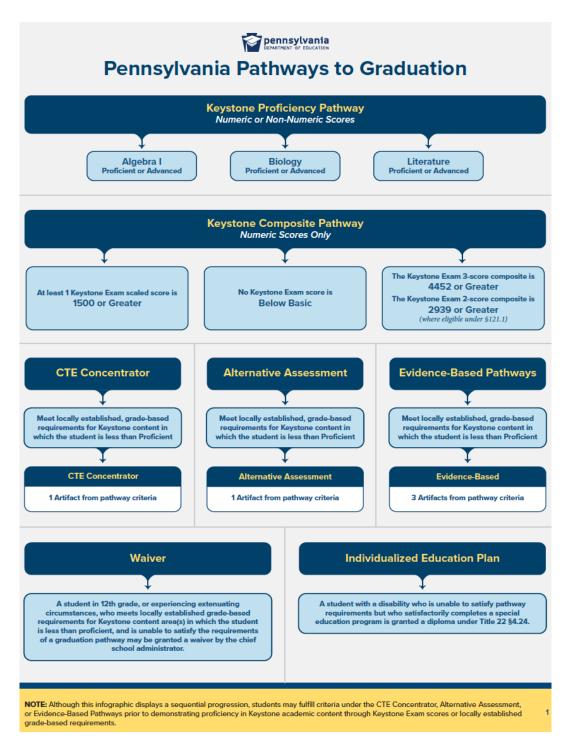
Subject Area	Credits Needed
English	4
Social Studies	3
Mathematics	3
Science	3
Additional Core Credits in	3
English, Social Studies, Math,	(maximum of 2 may be World Language)
Science, or World Language *	
Physical Education	1.25
Health	.25
Driver's Ed	.25
Freshmen Seminar	.25
Junior Seminar	.5
Courses of Choice	4
Total Credits	22.5

<sup>\*</sup> Completing a half-day or full-day CTC program or a minimum half-day work-based learning experience during the senior year will fulfill the additional three core credit requirement.

Students are responsible for the appropriate selection of courses to fulfill graduation requirements and to prepare for their post-secondary goals.

#### Pennsylvania Pathways to Graduation

The Keystone Exams are one component of Pennsylvania's Pathways to Graduation. The Keystone Exams are end-of-course assessments designed to measure students' proficiency in Algebra I, Biology, and Literature. Students are required to complete each of the Keystone Exams by the spring of their junior year in order to meet federal accountability requirements. Reference the chart on following pages for an overview of each Pathway.





# **Pathway Criteria**

#### **CTE Concentrator**

#### 1 Artifact

Industry-based competency certification

Likelihood of industry-based competency assessment success

Readiness for continued engagement in CTE Concentrator program of study

#### **Alternative Assessment**

#### 1 Artifact

Attainment of one alternative assessment score or better: ACT (21), ASVAB AFQT (31), PSAT/NMSQT (970), or SAT (1010)

Attainment of Gold Level or better on ACT WorkKeys

Attainment of 3 or better on AP Exam(s) related to each Keystone content area in which less than Proficient

Attainment of 4 or better on IB Exam(s) related to each Keystone content area in which less than Proficient

Successful completion of concurrent enrollment course(s) related to each Keystone content area in which less than Proficient

Successful completion of a pre-apprenticeship program

Acceptance into accredited, non-profit Institution of Higher Education (IHE) 4yr program for college-level coursework

#### **Evidence-Based**

# 3 Artifacts consistent w/student goals

ONE or more from Section One No more than TWO from Section Two

#### Section 1

Attainment of 630 or better on any SAT Subject Test

Attainment of Silver Level or better on ACT WorkKeys

Attainment of 3 or better on any AP Exam

Attainment of 3 or better on any IB Exam

Successful completion of any concurrent enrollment or postsecondary course

Industry-recognized credentialization

Acceptance into accredited, non-profit Institution of Higher Education (IHE) for college-level coursework in an other-than-4yr program

#### Section 2

Attainment of Proficient or Advanced on any Keystone Exam

Successful completion of a service-learning project

Letter guaranteeing full-time employment or military enlistment Completion of an internship, externship, or cooperative education program

Compliance with NCAA Division II academic requirements

#### **Promotion Requirements**

Students attending ELCO High School are required to register for a minimum of six (6) total credits per year. Sequential courses in English, Social Studies, Math, and Science must be successfully completed in their respective order.

The required number of cumulative credits must be earned prior to the start of each school year in order for students to be enrolled in the respective grade level. All required credits needed for graduation must be earned prior to the date of graduation in order to participate in commencement exercises.

In order to be promoted to the respective grade level, students must successfully earn the number of credits as indicated below:

	Cumulative Credits Needed
SOPHOMORE (10th)	5
JUNIOR (11 <sup>th</sup> )	10
SENIOR (12th)	16

<sup>\*</sup> Only approved summer school programs may be used to meet promotion or graduation requirements when failures occur.

#### **Transfer Students**

Students who move into the District and find themselves below the required credits for the expected grade level will be given due consideration for grade level placement based upon the successful completion of courses in the areas of English, Social Studies, Science, Math, Physical Education and Health in their previous school.

#### **ELCO+ Summer Learning Program**

Students are strongly encouraged to pass the courses in which they are enrolled during the school year. However, students who do not successfully earn a passing grade in a course(s) during the school year may be granted the opportunity to complete remedial courses during the summer in order to recoup the necessary credit, if a matching course is available. The offering of summer school courses is contingent upon course availability and sufficient student enrollment. The District cannot guarantee that all courses failed during the school year will be offered through a summer school program. A fee will be charged for all summer school courses and will be incurred by the student. The ELCO+ Summer Learning Program may also require in-person attendance by the student in order to successfully complete the program.

#### Course Levels

The High School offers instruction at various academic levels: Advanced Placement, Honors, College Preparatory (CP), and Applied. Each level designates the academic difficulty and depth of study within a course. To ensure the most appropriate placement, students should consult with their teachers, school counselor, and parent(s)/guardian(s). Additional information about course placement decisions is described in the respective section below. Students may move between levels each academic year.

Advanced Placement (AP) courses offer students the opportunity to pursue college-level studies while in high school and follow the curriculum outlined by the College Board. Students experience a rigorous curriculum and have the opportunity to earn college credit or advanced standing in post-secondary coursework by taking the respective AP Exam(s) through the College Board and earning specific scores as established by individual post-secondary institutions. The AP Exams are paid for by the student and are administered on national test dates in May. While students are not required to take the respective AP Exams, students are strongly encouraged to complete the AP Exams as a way to earn college credit and to gauge knowledge acquired through AP coursework.

AP courses require a considerable amount of time outside of school engaging in course-related activities, which may include summer assignments and additional class meetings outside the regular school day. By registering for an AP course, students agree to complete the additional work in the time frame established by the respective AP teacher. If there is a concern regarding the course work, the student is expected to contact the teacher prior to the deadline for the submission of assignments. Failure to complete the summer assignments will not release the student from the obligation to remain in the class, and the missing work may be counted as zeros by the teacher and averaged into the student's grade for the course.

<u>Honors</u> level courses meet the needs of the academically-talented student and will require independent work in greater depth in each subject area. Extensive reading, writing, and presentation skills will be developed through extensive learning activities.

<u>College Prep</u> courses prepare students for a comprehensive two or four-year post-secondary program and involve substantial reading, writing, and presentation activities.

<u>Applied</u> courses are geared to the student who plans to attend a community college, a trade or technical school, or enter employment or the military immediately after high school.

#### **Course Placements**

Course level placement decisions are determined with consideration of multiple sources of data, including teacher recommendations, prerequisite course grades, PSSA and Keystone Exam performance, benchmark assessment data, and PVAAS student projections. While the *Educational Planning Guide* lists prerequisites for specific courses, all of these components are considered when determining appropriate course placements for students.

As students progress through their high school program, course levels may change from year to year. Teacher recommendations should be carefully considered in determining the appropriate placement of students in classes. When current High School students complete the online course selection process, they may see teacher recommendations for specific courses. Parents should be aware of teacher recommendations prior to signing the student's final course requests.

Additionally, students must obtain the specific recommendation of teachers in order to request certain courses, including AP, Dual Enrollment, and Independent Study courses. Teacher recommendation forms for these courses must be obtained by the student from the High School Counseling Office. The student is responsible for completing the form prior to the student's individual meeting with his/her counselor.

All prerequisites as listed in the *Educational Planning Guide* must be fulfilled in order to enroll in a course. If a student does not meet the prerequisite for a course he/she wishes to take, a "waiver of prerequisites" must be signed by the student and parent/guardian.

#### AP Capstone Diploma Program

The ELCO School District is approved by the College Board to offer the prestigious AP Capstone Diploma Program. The program is based on two year-long AP courses: AP Seminar and AP Research. These two AP courses differ from other AP courses in that they are not subject-specific but rather endeavor to develop students' skills in research, analysis, developing evidence-based arguments, collaborating, writing, and presenting. Students who complete the two-year sequence of AP Seminar and AP Research are eligible to earn one of two AP Capstone awards.

- Students earn the "AP Capstone Diploma" by earning scores of 3 or higher on both the AP Seminar and AP Research exams as well as on four additional AP Exams of their choosing.
- Students earn the "AP Seminar and Research Certificate" by earning scores of 3 or higher on both the AP Semester and AP Research exams but NOT on four additional AP Exams.

#### "College in the High School"

The ELCO School District offers students various opportunities to earn college credit while in high school. Through agreements with post-secondary institutions, including Harrisburg Area Community College and Harrisburg University, students may concurrently earn both high school and college credit by successfully completing certain CIHS designated courses on the ELCO campus that are instructed by ELCO teachers approved by the respective post-secondary institution.

In order to earn credit through the designated post-secondary institution, students must complete the application process required by the respective post-secondary institution and fulfill the requirements CIHS course. Students may also be required to pass a placement exam for certain courses. If students elect to earn the college credits through a CIHS course, they are responsible for the costs associated with the CIHS course, which are offered to students at a substantially reduced rate. Current information regarding costs and other eligibility requirements is available through the Counseling Office. Courses for this program may change from year to year, so contact with the student's school counselor is essential.

#### **Dual Enrollment**

The ELCO School District has established dual enrollment agreements with several local colleges and universities, including HACC (Lebanon campus), Central Pennsylvania College, Harrisburg University, and Pennsylvania College of Health Sciences. Established dual enrollment agreements may change year to year. Through these dual enrollment agreements, juniors and seniors who meet the specified eligibility requirements may concurrently enroll in post-secondary courses and upon successful completion of the course(s), credit will be awarded by both the post-secondary institution and ELCO High School.

Students who complete a dual enrollment course will have the course listed on their ELCO High School transcript. For ELCO High School purposes, each dual enrollment course (Level 100 or higher) will carry Level IV course weight. The grades earned in dual enrollment courses will be factored into a student's weighted grade average and associated class rank. Students are responsible for providing an official transcript from the post-secondary institution to his/her school counselor at the conclusion of each semester indicating the final percentage grade earned in the course. A course will not be added to a student's ELCO course history without providing the transcript from the post-secondary institution.

Additional information, including specific eligibility requirements established by each institution, is available through the High School Counseling Office. General guidelines that apply to the dual enrollment program include:

• Students must meet all eligibility and admissions requirements as outlined by the respective post-secondary institution.

- Students must be making satisfactory progress toward fulfilling graduation requirements as determined by the District.
- Students may only take courses that are not offered as part of the current curriculum offerings at ELCO High School.
- A student is not permitted to substitute a dual enrollment course for a required high school course unless approved by the building principal after consultation with the appropriate department chair. Credit earned through dual enrollment courses will count towards "elective" credit in terms of graduation requirements, unless otherwise approved by the building principal.
- Students and parents are responsible for all tuition costs and other fees associated with a dual enrollment course.
- Students and parents are responsible for transportation to and from the postsecondary institution. A signed student driving agreement will be required.
- Courses taken through a dual enrollment program may not be remedial courses and must be at the 100-level and equivalent to at least 3 college credits.
- Courses completed outside of the regular school year (i.e., summer courses) will not be approved for dual enrollment credit and will not be listed on a student's high school transcript.
- The student is responsible for meeting the attendance and other requirements as outlined by the instructor and the post-secondary institution.
- Dropping a dual enrollment course after the established drop/add periods may result in the student not meeting the District's graduation requirements. The same drop/add policy followed in the High School applies to dual enrollment courses as well, in addition to the policies established at the post-secondary institution.
- In order to transfer official college credit earned through dual enrollment, the student is responsible for contacting the post-secondary institution where he/she earned the dual enrollment credits and transferring those credits to his/her future post-secondary institution.

#### <u>High School Credit Earned Prior to Ninth-Grade</u>

High School coursework recognized by Eastern Lebanon County High School that is completed prior to a student entering ninth-grade will be recognized as credits earned towards high school graduation. These courses include Spanish I, French I, and courses taken within the High School building by acceleration. The course name, final grade, and the credit earned will be reflected on the student's high school transcript.

#### Career and Technical Education

Career and Technical Education programs prepare students for a wide range of college and career opportunities and help students develop the skills that are sought by today's employers. A variety of Career and Technical Education programs are offered through the Lebanon County CTC as well as through ELCO's Agriculture Science program. For more information on the opportunities available through the Lebanon County CTC, consult that section of the *Educational Planning Guide*.

Students who desire to attend the Lebanon County CTC should consult with their school counselor for information. Tenth and eleventh-grade students have the opportunity to visit the CTC in the fall of each school year. Applications to attend the CTC are available to students in December of each school year. Acceptance into an over-enrolled program at the CTC is based on a student's attendance, grades, completed courses, and disciplinary record.

Students who are enrolled in a program at CTC will have the CTC program listed on their High School transcript. Certain CTC programs are eligible for dual enrollment credit at various post-secondary institutions for students meeting established criteria. The credits awarded through dual enrollment programs and articulation agreements through the CTC will appear on the respective post-secondary institution's transcript.

Once accepted into a program at the CTC, students may only withdraw per the schedule change guidelines outlined in the *Educational Planning Guide*. Once the school year begins, any request for changes to a student's CTC status/enrollment will be determined on an individual basis and only with consideration of extenuating circumstances. School-year withdrawals from the CTC may only occur at the semester change.

Admission to ELCO's Career and Technical Education Agriculture Science Program is open to all students enrolled at ELCO High School. Students who are interested in pursuing a CTE Agriculture Science course must meet the prerequisites established for each course. Students who complete the appropriate sequence of courses and are considered to be "program completers" are eligible to take the corresponding NOCTI exam during the spring of their senior year on established test dates. Additionally, students may be eligible to earn college credits through Delaware Valley University and are encouraged to pursue various industry credentials available through the program.

#### **Scheduling of Courses**

Courses listed in the *Educational Planning Guide* may be cancelled due to limited student requests. Further, students are also cautioned that it may be impossible to schedule all of the courses requested. Therefore, students are encouraged to give careful consideration to the selection of alternate courses during the course request process.

#### Schedule Change Procedures

It is imperative that students and parents dedicate sufficient consideration and discussion to the course selection process. The courses that are selected by students in the spring of each school year determine staffing, course offerings, and the overall development of the master schedule. The decision-making process involved in selecting a student's course requests should consider the student's interests, skills, abilities, and post-secondary goals. The course selection form, signed by a parent/guardian, represents the student's final course requests. If a signed course selection form is not received from the student by the deadline date, the selections made at the student's meeting with the counselor will represent the student's final course requests.

ALL schedule change requests for the entire academic year must be completed prior to August 9, 2024. The only exceptions will be for students who successfully complete summer school courses and receive their final grade after this date. Once the school year begins, any request for changes to a student's schedule will be determined on an individual basis and only with consideration for extenuating circumstances, such as:

- Medical issues that interfere with a student's ability to take a course. A medical
  professional's note indicating that participation in the course will have a negative
  impact on the student will be necessary.
- Course grades, student testing data, or teacher/counselor recommendation indicate that a change in course level is in the best interest of the student.
- A course needed to fulfill graduation requirements was not scheduled.
- A course was scheduled for which the student did not meet the prerequisite(s).
- An unforeseen opportunity for a challenging and unique educational experience develops that serves the student's best interests.
- A student was scheduled for a course that he/she previously completed.
- An irresolvable scheduling conflict or scheduling error occurred.

To request a schedule change, the student must obtain a "schedule change request" form from his or her counselor. All changes must have the approval of the teacher(s) involved, a parent/guardian, the counselor and an administrator. The student must remain in the class until notified by the counselor as to when the change will become effective. Schedule changes will not be made to accommodate requests for specific teachers, lunch periods, etc.

Once the school year or semester begins, schedule changes will not be permitted except for the extenuating circumstances listed above and only with administrative approval. Therefore, students must give careful consideration to their course selections in the spring and realize that schedule changes will likely not be possible once the school year begins. The schedule change procedures listed below will be followed for changes that occur once the school year has commenced:

#### For a semester course:

- If a student withdraws from a semester course between 11 and 23 school days into the course, the dropped course(s) will appear on the student's transcript with "WP" or "WF" to indicate the student's withdrawal from the course. A "WP" will be indicated on the student's transcript if the student had a passing grade at the time of the withdrawal from the course. A "WF" will be indicated on the student's transcript if the student had a failing grade at the time of the withdrawal from the course.
- If a student withdraws from a semester course after 23 school days into the course, the dropped course will appear on the student's transcript as a "WF" and will be factored into a student's GPA with zero credit being earned in the course.

#### For a year-long course:

- If a student withdraws from a year-long course between 23 and 45 school days into the course, the dropped course(s) will appear on the student's transcript with "WP" or "WF" to indicate the student's withdrawal from the course. A "WP" will be indicated on the student's transcript if the student had a passing grade at the time of the withdrawal from the course. A "WF" will be indicated on the student's transcript if the student had a failing grade at the time of the withdrawal from the course.
- If a student withdraws from a year-long course after 45 school days into the course, the dropped course will appear on the student's transcript as a "WF" and will be factored into a student's GPA with zero credit being earned in the course.

#### **Pupil Personnel Services**

Pupil personnel services help students develop both academically and socially-emotionally and are designed and implemented by a team of educational specialists. The District provides classroom teachers, school counselors, nurses, psychologists, a social worker and administrators to assist students. Other specialists are available through the Lancaster-Lebanon Intermediate Unit and other partner agencies.

#### **Counseling Department**

The High School Counseling Department strives to promote and enhance student achievement by addressing the academic, personal, and career development needs of students. Major functions are to provide individual and group counseling services to assist students with educational and career planning and to enhance their social-emotional growth. Counselors guide students in course selection, assist students in career and college planning, and coordinate and maintain a complete record of student progress.

#### Academically Talented and Gifted Students

Academically talented and gifted students are encouraged to pursue the most demanding curriculum offered at ELCO, which is comprised of the Advanced Placement (AP) and Honors-level courses listed in the *Educational Planning Guide*. While it is difficult for any one student to enroll in all of the courses identified, students should request courses that best complement their interests and prepare them for their post-secondary education and career plans. Students are encouraged to combine their core curricular program with electives and extra-curricular opportunities in the areas of fine arts, drama, publications, music, theatre, and interscholastic athletics.

#### **Special Education**

Special education support services are available to meet the needs of identified exceptional individuals. Students believed to be eligible for special education services should be directed, through a school counselor, to the Director of Pupil Services and/or Director of Special Education.

#### Homebound Instruction

The Homebound Instruction program is a tutorial service provided for students who have a diagnosed long-term physical or psychological illness that confines them to the home or hospital. Students who expect to be confined for physical disability, illness, injury, or other urgent reasons for more than ten school days should consult with the Assistant Principal for information on the required documentation. The nature of the illness and the length of the anticipated absence must be verified by the student's physician. Upon approval, a schedule for homebound instruction will be established.

#### **Future Ready**

ELCO's Future Ready Facilitator supports students in their post-secondary planning and career exploration through establishing partnerships with employers, industries, institutions of higher education, and the military. The Future Ready Facilitators collaborates with school counselors and other personnel to support students in their exploration and planning and helps to forge connections to provide opportunities for students. For more information, visit the "Future Ready" page on the ELCO School District website.

#### College Entrance Exam Preparation

College entrance exam (SAT, ACT) preparation materials and resources are available through the High School Counseling Office, including resources available through the College Board and Khan Academy, which has partnered with the creators of the SAT to have exclusive access to build a personalized practice program for students. These tools are free and available for every student to take ownership of their personal learning and their future. Students who take the PSAT may elect to receive a personalized code for access to a personal profile with Khan Academy.

#### Naviance

ELCO High School offers the "Naviance" online program to students and parents to support students' college and career exploration and readiness. The Naviance platform facilitates students in aligning their strengths and interests to their post-secondary goals. Students will use the various tools within Naviance to identify their strengths, goals, skills and interests, plan their High School course of study, explore careers and post-secondary schools, apply to post-secondary institutions, and search for scholarships.

Students and parents may access ELCO High School's Naviance page at <a href="http://connection.naviance.com/eastlebcs">http://connection.naviance.com/eastlebcs</a>. Questions about the program, as well as information on how to register, should be directed to the school counselors.

#### **PowerSchool**

Students and parents are encouraged to frequently access PowerSchool in order to monitor student progress in courses. Teachers update grades in PowerSchool on a regular basis. Daily announcements, attendance, and other student information may also be accessed through the PowerSchool for Parents portal. Information on how to access the PowerSchool for Parents portal may be obtained through the District's website.

#### Schoology

Schoology is the District's Learning Management System and contains information and resources pertaining to all of the student's courses. Club advisors, staff, and student organizations also utilize Schoology to communicate information to students. Parents may create a Schoology Parent account as well. Information on creating a Schoology account may be obtained through the District's website.

#### NCAA Eligibility

Students who are considering playing Division I or Division II intercollegiate sports after high school must complete the eligibility process through the NCAA Eligibility Center. In order to be certified by the NCAA Eligibility Center, students are required to earn specific credits in high school in core courses at the college preparatory level as well as a minimum grade point average and college entrance exam score.

Students interested in competing in athletics at the collegiate level must inform their school counselor early in their high school career, preferably during the freshman year, and create a Certification Account through the NCAA Eligibility Center. Consult the NCAA Eligibility Center website for information on the specific requirements for certification at <a href="https://web3.ncaa.org/ecwr3">https://web3.ncaa.org/ecwr3</a>.

#### Post-Secondary Planning Timeline

The following are suggested activities for students to complete in order to prepare for their post-graduation goals. For assistance with any of the activities below, students should consult their school counselor.

#### 9th Grade

- Select courses that will challenge you and explore areas of interest that align with your post-secondary goals.
- Develop effective study habits.
- Get involved in school activities and clubs.
- Talk with parents, friends, relatives, and neighbors about their careers and explore career information that is available through Naviance.
- Investigate the various options for post-secondary education.
- Successfully complete the Freshmen Seminar course and identify a Career Cluster that is of interest to you and matches your identified skills and abilities.

#### 10th Grade

- Think seriously about your post-secondary goals, identifying what type of post-secondary education, military branch, or employment you would like to pursue.
- Align your course selections with your post-secondary goals and discuss your goals when meeting with your school counselor.
- Discuss your goals with your parent/guardian and together explore the resources available through Naviance.
- Begin to develop an understanding of the financial aid process and explore the various scholarship opportunities that are available.
- Take the PSAT10 during the spring of your sophomore year.

#### 11th Grade

- Communicate your post-secondary goals to your school counselor, teachers, and parents/guardians so that they may best support you in preparing to attain your goals.
- Gather specific information pertaining to your post-secondary goals, whether that be information specific to post-secondary schools, military branches and opportunities, or career fields.

- Utilize the search features available through Naviance to identify post-secondary schools of interest. Explore the schools' websites and contact their Admissions Office for more information.
- Monitor the schedule for admissions representatives and military personnel who visit ELCO. Talk to the representatives when they are available. This is a great opportunity to make personal contact with an admissions rep!
- Take the PSAT/NMSQT in the fall and follow through on the recommended practice through Khan Academy prior to taking the SAT in the spring.
- Attend college and career fairs whenever possible.
- Take the SAT or ACT in March, May, or June of your junior year if you are planning to further your education at a four-year college or other post-secondary institution that requires college entrance exam scores.
- Take AP Exams for the Advanced Placement courses in which you are enrolled.
- Visit post-secondary institutions in the spring and summer in order to identify the list of schools to which you wish to apply.

#### 12th Grade

- Continue to explore college search resources to finalize the post-secondary institutions to which you intend to apply.
- Be aware of application procedures and deadlines for each post-secondary institution.
   Many applications must be submitted online or through the Common Application or Naviance.
- Coordinate each college application with your school counselor and update your information in Naviance.
- Research scholarships offered by each institution as well as those available through the school and community organizations.
- Students who have not taken the SAT or the ACT, or wish to retake one or both college entrance exams, register for the correct test early in the school year at <a href="https://www.collegeboard.com">www.collegeboard.com</a> or <a href="https://www.actstudent.org">www.actstudent.org</a>.
- Attend Financial Aid Information sessions.
- All seniors applying for financial aid should complete the Free Application for Federal Student Aid (FAFSA) in the fall. Apply online at www.fafsa.ed.gov.
- If a private post-secondary institution requires the CSS Profile, obtain a profile registration form at <a href="https://www.collegeboard.com">www.collegeboard.com</a>.
- Male students must register for Selective Service 180 days before or 30 days after their 18th birthday. Registration is required in order to be considered for state or federal financial aid. Students may register on the FAFSA application form or at <a href="www.sss.gov">www.sss.gov</a>.
- If either of your parents is deceased, disabled, or retired, contact the Social Security Administration for educational benefits.
- If either of your parents is a veteran, contact the Veterans Administration or the American Legion for other financial aid possibilities.
- Review award letters you have received from various schools.
- Send your acceptance letter and required deposit to your chosen school, being careful to follow all instructions.
- Notify the other schools to which you have applied that you will not be attending.
- Pay close attention to financial aid deadlines.

#### Weighted Class Rank

Class rank is a measure of the academic achievement of any one student in a class in relationship to all other students in the class and is determined using a student's cumulative weighted GPA. Courses in the core academic areas of English, Math, Science, and Social Studies, World Languages, and advanced elective courses may be given additional weight to calculate a student's weighted grade average for the purpose of determining class rank. The level assigned to each course is listed in the Educational Planning Guide. Courses that are graded on a pass/fail basis do not factor into a student's weighted grade average or class rank. Class rank is calculated at the conclusion of each school year.

Class rank is determined using the weighted factor method, as shown in the table below, to calculate a student's weighted cumulative grade average. To obtain the weighted grade average, the percent grade assigned by the teacher as the student's final course grade is multiplied by the credit value established for the course and then by the weighted factor assigned to the course as indicated below:

<u>Level</u>	Weighted Factor	<u>Description</u>
Level IV	1.12	Includes Advanced Placement (AP), College in the High School, EMT and dual enrollment courses
Level III	1.06	Includes Honors courses and $3^{\rm rd}$ and $4^{\rm th}$ year World Language courses
Level II	1.03	Includes College Prep courses and advanced elective courses
Level I	1.00	Includes Applied courses and all courses not otherwise designated

#### For example,

Course	Percent	х	Course Credit	х	Weighted Factor	=	Weighted Grade
Lit, Analysis, and Comp III - CP	87	х	0.5	Х	1.03	=	44.805
Creative Writing	93	Х	0.5	Х	1.03	=	49.29
Global Studies & Geography – Applied	95	Х	1.0	Х	1.00	П	95
AP Statistics	82	Х	1.0	Х	1.12	П	91.84
Physics I: Mechanics - Honors	91	Х	1.0	Х	1.06	П	96.46
Spanish III	85	Х	1.0	Х	1.06	П	90.1
Web Design I	93	х	0.5	Х	1.00	11	46.5
Metal Manufacturing I	89	х	0.5	Х	1.00	=	44.5
TOTALS			6.0			=	558.495

To calculate the student's weighted grade average, divide the student's total weighted grade (558.495 in the above example) by the student's total number of credits attempted (6.0 credits in the above example) to determine the student's weighted grade average (which would be 93.0825 in the above example). The weighted grade average is used to determine the student's class rank.

#### Valedictorian/Salutatorian

Valedictorian and Salutatorian for the graduating class are determined as of the end of the third marking quarter of the senior year, based on the cumulative weighted grades at that time. Once the valedictorian and salutatorian are determined at the end of the third marking quarter, those positions are fixed. A final senior class rank is then calculated at the conclusion of the school year.

#### **Honor Roll**

Students may earn Honor Roll recognition at the conclusion of each marking period by earning the respective weighted marking quarter grade point averages (GPA):

- Distinguished Honor Roll: Weighted marking quarter GPA of 100 or higher
- Honor Rolle: Weighted marking quarter GPA of 95 or higher

#### Percentages/Letter Grades

Letter grades may be assigned to students based on the percent ranges listed below:

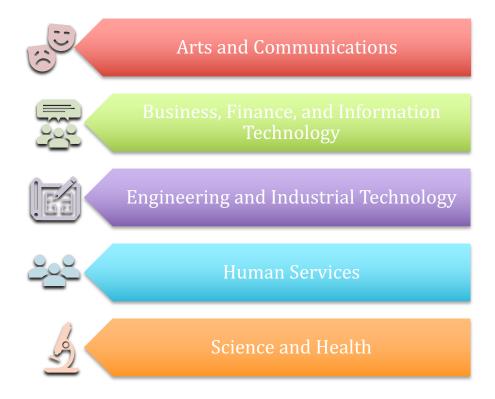
Percent Range	Letter Grade
98-100	A+
93-97	Α
90-92	A-
87-89	B+
83-86	В
80-82	B-
77-79	C+
73-76	С
70-72	C-
67-69	D+
63-66	D
60-62	D-
less than 60	F

### Career Clusters and Pathways

The Pennsylvania Department of Education has identified five Career Pathways that encompass sixteen Career Clusters. Students are encouraged to investigate the five Career Pathways to assist in planning appropriate course selections that will support their post-secondary goals, particularly within the elective areas.

Descriptions for each Career Pathway are listed on the following pages along with a listing of the ELCO courses that correspond to each Career Pathway. Students should explore the interest and ability questions listed to determine the Career Pathway that most appeals to them in addition to considering the various career exploration activities in which the student has participated, including the activities in Naviance. Students will also find the highest paying, fastest growing, and most employed occupations for each Career Cluster. The occupational information was obtained from the PA Career Zone website at <a href="https://www.pacareerzone.org">www.pacareerzone.org</a>.

For more information on Pennsylvania's Career Clusters and Pathways, including relevant employment outlooks, visit the PA Career Zone website.



# Arts and Communications Pathway

The Arts and Communications pathway is designed to cultivate students' awareness, interpretation, application and production of visual, verbal and written work and includes the following Career Clusters:

- Arts
- A/V Technology
- Communication

Are you interested in?	Can you?	Do you enjoy?
<ul> <li>news reporting and writing</li> <li>interviewing and reviewing</li> <li>multi-media productions</li> <li>actions</li> <li>radio, TV, film, video</li> <li>performing in a band or chorus</li> <li>attending concerts</li> <li>drawing, painting</li> <li>creative artwork</li> </ul>	<ul> <li>sing</li> <li>play an instrument</li> <li>be creative</li> <li>articulate clearly</li> <li>write and conduct interviews</li> <li>meet deadlines</li> <li>draw</li> <li>sculpt</li> </ul>	<ul> <li>writing</li> <li>making videos</li> <li>working with film props</li> <li>seeking creative ideas</li> <li>working with sound effects</li> <li>performing in front of a live audience</li> <li>working with computers</li> <li>hands-on, minds-on activities</li> </ul>

Arts and Communication Pathway Courses				
<ul> <li>Advanced Stage Production</li> <li>American Musical Theater</li> <li>Animation</li> <li>AP Capstone</li> <li>AP English Language and Composition</li> <li>AP English Literature and Composition</li> <li>AP Music Theory</li> <li>Art I, II, III</li> <li>Art Portfolio</li> <li>Band</li> <li>Career Connections</li> <li>Chorus</li> <li>Commercial Art &amp; Design (CTC)</li> </ul>	<ul> <li>Computer Applications</li> <li>Computer Graphics</li> <li>Concert Choir</li> <li>Digital Video</li> <li>Entrepreneurship</li> <li>History of Pop Music</li> <li>Independent Art</li> <li>LAC I, II, III, IV</li> <li>Leadership in Action</li> <li>Marketing</li> <li>Media Communications Technology (CTC)</li> <li>Music Stage Production</li> <li>Music Theory</li> <li>Piano</li> </ul>	<ul> <li>Portfolio</li> <li>Pottery I, II</li> <li>Printmaking</li> <li>Psychology</li> <li>Rock Band</li> <li>Sociology</li> <li>Sound Recording and Production</li> <li>Television and Film Production I, II</li> <li>Voice Class</li> <li>Web Design I, II</li> <li>World Languages</li> <li>Yearbook/Journalism</li> </ul>		

# Arts, A/V Technology, and Communication Occupations

Highest Paying	Fastest Growing	Most Employed
<ul> <li>Art Directors</li> <li>Film and Video Editors</li> <li>Telecommunications     Line Installers and     Repairers</li> <li>Commercial and     Industrial Designers</li> </ul>	<ul> <li>Costume Attendants</li> <li>Actors</li> <li>Audio and Video         Technicians</li> <li>Film and Video Editors</li> <li>Dancers</li> </ul>	<ul> <li>Graphic Designers</li> <li>Printing Press Operators</li> <li>Telecommunications         Equipment Installers         and Repairers</li> <li>Musicians and Authors</li> </ul>

# Business, Finance, and Information Technology Pathway

The Business, Finance, and Information Technology pathway is designed to prepare students to enter the world of business, finance and information services and includes the following Career Clusters:

- Information Technology
- Finance and Insurance
- Business and Administration
- Marketing Sales and Service

Are you interested in?	Can you?	Do you enjoy?
<ul> <li>a business environment</li> <li>management</li> <li>sales</li> <li>computers and technology</li> <li>presentations to groups</li> <li>telecommunications</li> <li>advertising</li> <li>different work sites</li> <li>insurance</li> <li>record keeping</li> </ul>	<ul> <li>work easily with others</li> <li>organize your time efficiently</li> <li>work with statistics</li> <li>use computers &amp; other technology</li> <li>pay attention to details</li> <li>solve problems</li> <li>work independently</li> <li>show initiative</li> <li>work on a team</li> </ul>	<ul> <li>meeting with groups</li> <li>making budgets</li> <li>organizing a project</li> <li>planning an event</li> <li>working with technology</li> <li>selling products &amp; services</li> <li>processing numbers &amp; figures</li> <li>preparing financial reports</li> <li>following directions</li> <li>learning new software programs</li> </ul>

Business, Finance, and Information Technology Pathway Courses					
Accounting IA, IB, II, III	Computer Graphics	Marketing			
Animation	Digital Video	Music Recording and			
AP Computer Science	• Economics	Production			
Principles	<ul> <li>Entrepreneurship</li> </ul>	Personal Finance			
AP Calculus	<ul> <li>Foundations of Coding</li> </ul>	Probability & Statistics			
AP Macroeconomics	Freshman Seminar	Television and Film			
AP Statistics	General Business	Production			
Business Math	Internship	Web Design I, II			
Career Connections	Leadership in Action	World Language			
Computer Applications	Living on Your Own	Yearbook/Journalism			

**Information Technology Occupations** 

Highest Paying	Fastest Growing	Most Employed
<ul> <li>Telecommunications         Engineering Specialist</li> <li>Computer Network Architects</li> <li>Information Security Analysts</li> <li>Health Informatics Specialists</li> </ul>	<ul> <li>Information Security         Analysts     </li> <li>Search Marketing         Strategists     </li> <li>Computer User Supports         Specialists     </li> </ul>	<ul> <li>Search Marketing Strategists</li> <li>Computer User Supports Specialists</li> <li>Health Informatics Specialists</li> </ul>

**Finance and Insurance Occupations** 

Highest Paying	Fastest Growing	Most Employed
<ul> <li>Financial Managers</li> <li>Treasurers and Controllers</li> <li>Actuaries</li> <li>Personal Financial Advisors</li> </ul>	<ul> <li>Actuaries</li> <li>Financial Managers</li> <li>Treasurers and Controllers</li> <li>Insurance Sales Agents</li> </ul>	<ul> <li>Accountants</li> <li>Financial Managers</li> <li>Treasurers and Controllers</li> <li>Tellers</li> </ul>

**Business and Administration Occupations** 

Highest Paying	Fastest Growing	Most Employed
<ul> <li>Chief Executives</li> <li>Chief Sustainability         Officers</li> <li>Investment Fund         Managers</li> <li>Computer and         Information Systems         Managers</li> </ul>	<ul> <li>Operations Research Analysts</li> <li>Investment Fund Managers</li> <li>Meeting, Convention, and Event Managers</li> <li>Management Analysts</li> </ul>	<ul> <li>Office Clerks, General</li> <li>Customer Service Representatives</li> <li>Stockers and Order Fillers</li> <li>Secretaries and Administrative Assitants</li> </ul>

**Marketing Sales and Service Occupations** 

Highest Paying	Fastest Growing	Most Employed
<ul> <li>Sales Managers</li> <li>Marketing Managers</li> <li>Advertising and Promotions Managers</li> <li>Sales Engineers</li> </ul>	<ul> <li>Market Research Analysts and Marketing Specialists</li> <li>Drivers/Sale Workers</li> <li>Sales Representatives</li> <li>Marketing Managers</li> </ul>	<ul> <li>Retail Salespersons</li> <li>Cashiers</li> <li>Sales Representatives,         Wholesale and         Manufacturing</li> <li>First-Line Supervisors of         Retail Sales Workers</li> </ul>

# Engineering and Industrial Technology Pathway

The Engineering and Industrial Technology pathway is designed to cultivate students' interests, awareness and application to careers related to technologies necessary to design, develop, install, and maintain physical systems.

#### Includes:

- Architecture and Construction
- Manufacturing
- Transportation, Distribution, and Logistics

Are you interested in?	Can you?	Do you enjoy?
<ul> <li>building and construction</li> <li>tools, equipment, and materials</li> <li>woodworking</li> <li>math and science classes</li> <li>fitness and sports</li> <li>precision work</li> <li>design and architecture</li> <li>engineering</li> <li>computer technology</li> <li>production management</li> <li>how things work</li> </ul>	<ul> <li>apply science and math to real world issues</li> <li>read and understand directions</li> <li>solve problems of a complex nature</li> <li>understand directives and read maps</li> <li>organize reports and people</li> <li>see a task through the completion</li> <li>use a computer</li> </ul>	<ul> <li>traveling</li> <li>working with your hands</li> <li>designing/working with projects</li> <li>working in a lab setting</li> <li>working on a team</li> <li>building with your hands</li> <li>operating tools and equipment</li> <li>paying close attention to detail</li> </ul>

Engineering and Industrial Technology Pathway Courses		
<ul> <li>Accounting IA, IB, II, III</li> <li>Agriculture Mechanics</li> <li>All 2-Year Half-day CTC Programs</li> <li>AP Calculus</li> <li>AP Computer Science Principles</li> <li>AP Physics I: Algebra-Based</li> <li>AP Statistics</li> <li>Biology</li> <li>Business Math</li> <li>Chemistry I, II</li> <li>Commercial Driver's License Training</li> </ul>	<ul> <li>Computer Aided Drafting &amp; Design (CADD)</li> <li>Computer Applications</li> <li>Computer Graphics</li> <li>Emergency Medical Technician</li> <li>Engineering Design Capstone</li> <li>Foundations of Engineering &amp; Design</li> <li>Home Repair &amp; Construction</li> <li>Instrumental Analysis</li> <li>Introduction to Agriculture</li> <li>Landscape Technology (CTC)</li> <li>Marketing</li> <li>Mathematics courses</li> </ul>	<ul> <li>Metal Manufacturing I, II</li> <li>Physics I, II</li> <li>Power Technology I, II</li> <li>Technology Education Independent Study</li> <li>Web Design I, II</li> <li>Welding and Industrial Machining</li> <li>Woodworking I, II, III</li> <li>World Language</li> </ul>

**Architecture and Construction Occupations** 

in emicetal e ana constituction occupations		
Highest Paying	Fastest Growing	Most Employed
<ul> <li>Construction Managers</li> <li>Transportation Engineers</li> <li>Civil Engineers</li> <li>Architects</li> </ul>	<ul> <li>Septic Tank Servicers and Sewer Pipe Cleaners</li> <li>Floor Layers</li> <li>Tile and Hard Stone Setters</li> <li>Construction Managers</li> </ul>	<ul> <li>Construction Laborers</li> <li>Carpenters</li> <li>Landscaping and Groundskeeping Workers</li> <li>First Line Supervisors of Construction Trades</li> </ul>

**Manufacturing Occupations** 

Translated ing occupations		
Highest Paying	Fastest Growing	Most Employed
<ul> <li>Power Distributors and Dispatchers</li> <li>Electrical and Electronics Repairers, Powerhouse, Substation, and Relay</li> <li>Power Plant Operators</li> <li>Hydro Electric Plant Technicians</li> </ul>	<ul> <li>Wind Turbine Service         Technicians</li> <li>Computer Numerically         Controlled Tool         Programmers</li> <li>Industrial Machine         Technicians</li> </ul>	<ul> <li>Recycling and Reclamation Workers Team Assemblers</li> <li>Maintenance and Repair Workers</li> <li>First Line Supervisors of Production and Operating Workers</li> </ul>

**Transportation, Distribution, and Logistics Occupations** 

Transportation, Distribution, and Logistics occupations		
Highest Paying	Fastest Growing	Most Employed
<ul> <li>Air Traffic Controllers</li> <li>Commercial Pilots</li> <li>Transportation, Storage, and Distribution Managers</li> <li>Logistics Engineers</li> </ul>	<ul> <li>Recreational Vehicle Service Technicians</li> <li>Logistic Engineers</li> <li>Logistic Analyst</li> <li>Logisticians</li> </ul>	<ul> <li>Laborers and Freight, Stock, and Material Movers</li> <li>Heavy and Tractor-Trailer Truck Drivers</li> <li>Light Truck or Delivery Services Drivers</li> <li>Industrial Truck and Tractor Operators</li> </ul>

# **Human Services Pathway**

The Human Services pathway is designed to cultivate students' interests, skills and experiences for employment in careers related to families and human needs.

#### Includes:

- Law and Public Safety
- Education and Training
- Hospitality and Tourism
- Government and Public Administration
- Human Services

Are you interested in?	Can you?	Do you enjoy?
<ul> <li>working with people</li> <li>owning your own business</li> <li>aging adults</li> <li>child development</li> <li>family &amp; social services</li> <li>food preparation</li> <li>teaching</li> <li>counseling</li> </ul>	<ul> <li>organize well</li> <li>plan and direct programs</li> <li>be creative</li> <li>communicate well</li> <li>assume leadership</li> <li>work with a team</li> <li>use interpersonal skills</li> <li>be conscientious and dependable</li> <li>plan budgets</li> </ul>	<ul> <li>communication services</li> <li>helping and protecting others</li> <li>working with people</li> <li>counseling and advising people</li> <li>serving others' needs</li> <li>interviewing people</li> <li>selling products or services</li> <li>handling customer complaints</li> <li>searching for answers to human problems</li> </ul>

Human Services Pathway Courses		
<ul> <li>AP U.S. Government</li> <li>AP U.S. History</li> <li>AP World History: Modern</li> <li>Career Connections</li> <li>Child Development Independent Study</li> <li>Cooking Light and Easy</li> <li>Cosmetology (CTC)</li> <li>Culinary Arts (CTC)</li> <li>Culinary Café</li> <li>Culinary Chemistry</li> </ul>	<ul> <li>Economics Education         Seminar</li> <li>Emergency Medical         Technician</li> <li>Freshmen Seminar</li> <li>General Business</li> <li>Global Cuisine</li> <li>Global Studies and         Geography</li> <li>Health</li> <li>Holocaust and Genocide         Studies</li> </ul>	<ul> <li>Human Development</li> <li>Law Enforcement (CTC)</li> <li>Leadership in Action</li> <li>Living on Your Own</li> <li>Pastry Arts (CTC)</li> <li>Personal Finance</li> <li>Preschool: Age 3 &amp; Ages 4-5</li> <li>Psychology</li> <li>Sociology</li> <li>U.S. History III</li> <li>U.S. Government</li> <li>World Language</li> </ul>

**Law and Public Safety Occupations** 

Law and I ablic ballety occupations		
Highest Paying	Fastest Growing	Most Employed
<ul> <li>Lawyers</li> <li>First-Line Supervisors of Police and Detectives</li> <li>Administrative Law Judges Adjudicators, and Hearing Officers</li> <li>Intelligence Analysts</li> </ul>	<ul> <li>Lifeguard, Ski Patrol, and other Recreational Protective Services</li> <li>Gambling Surveillance Officers</li> <li>Forensic Science Technicians</li> <li>Paralegals</li> </ul>	<ul> <li>Security Guards</li> <li>Lawyers</li> <li>Police and Sherriff's Patrol Officers</li> <li>Customs and Border Protection Officers</li> </ul>

**Education and Training Occupations** 

Highest Paying	Fastest Growing	Most Employed	
<ul> <li>Economics Teachers,         Postsecondary</li> <li>Health Specialties         Teachers, Postsecondary</li> <li>Business Teachers,         Postsecondary</li> <li>Computer Science         Teachers, Postsecondary</li> </ul>	<ul> <li>Interpreters and Translators</li> <li>Coaches and Scouts</li> <li>Self-Enrichment Teachers</li> <li>Nursing Instructors, Post-Secondary</li> </ul>	<ul> <li>Elementary School         Teachers</li> <li>Secondary School Teachers,         Except Special and         Career/Technical         Education</li> <li>Middle School Teachers</li> <li>Preschool Teachers</li> </ul>	

**Hospitality and Tourism Occupations** 

Highest Paying	Fastest Growing	Most Employed
<ul> <li>Food Service Managers</li> <li>Chefs and Head Cooks</li> <li>Athletes and Sports Competitors</li> <li>Lodging Managers</li> </ul>	<ul> <li>Ushers, Lobby Attendants, and Ticket Takers</li> <li>Amusement and Recreation Attendants</li> <li>Cooks, Restaurant</li> <li>First Line Supervisors to Gambling Service Workers</li> </ul>	<ul> <li>Baristas</li> <li>Fast Food and Counter Workers</li> <li>Janitors and Cleaners, Except Maids and Housekeeping Cleaners</li> <li>Waitress and Waiters</li> </ul>

**Government and Public Administration Occupations** 

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Highest Paying	Fastest Growing	Most Employed		
<ul> <li>Financial Examiners</li> <li>Transportation Inspectors</li> <li>Transportation Vehicle,         Equipment, and Systems         Inspector</li> <li>Aviation Inspectors</li> </ul>	<ul> <li>Financial Examiners</li> <li>Occupational health and Safety Specialists</li> <li>Occupational Health and Safety Technicians</li> <li>Statistical Assistants</li> </ul>	<ul> <li>Equal Opportunity         Representatives and         Officers</li> <li>Government Property         Inspections and         Investigators</li> <li>Environmental Compliance         Inspectors</li> <li>Compliance Officers</li> </ul>		

**Human Services Occupations** 

riuman bei vices occupations			
Highest Paying	Fastest Growing	Most Employed	
<ul> <li>Industrial-Organizational Psychologists</li> <li>Clinical Neuropsychologists</li> <li>Neuropsychologists</li> <li>Funeral Home Managers</li> </ul>	<ul> <li>Manicurists and Pedicurists</li> <li>Exercise Trainers and Group Fitness Instructors</li> <li>Massage Therapists</li> <li>Shampooers</li> </ul>	<ul> <li>Nannies</li> <li>Childcare Workers</li> <li>Hairdressers, Hairstylists, and Cosmetologists</li> <li>Child, Family, and School Social Workers</li> </ul>	

# Science and Health Pathway

The Science and Health pathway is designed to cultivate students' interests in the life, physical and behavioral sciences. In addition, it involves the planning, managing and providing of therapeutic services, diagnostic services, health information and biochemistry research and development.

#### Includes:

- Health Science
- Agriculture, Food, and Natural Resource
- Scientific Research/Engineering

Are you interested in?	Can you?	Do you enjoy?
<ul> <li>health care environment</li> <li>science and medicine</li> <li>medical research</li> <li>food production</li> <li>environment &amp; conservation</li> <li>pharmacy</li> <li>physical therapy</li> <li>sports/fitness</li> <li>information systems</li> <li>conservation</li> <li>radiology</li> </ul>	<ul> <li>pay attention to detail</li> <li>use computer and technology</li> <li>work in a lab setting or medical facility</li> <li>apply scientific theory to real-life problems</li> <li>working outdoors around animals and plants</li> <li>collect and analyze data from experiments</li> <li>working with people in need</li> <li>work with science and math theories</li> </ul>	<ul> <li>diagnosing and caring for sick animals</li> <li>work outdoors with wildlife</li> <li>solving problems</li> <li>working on cutting edge scientific research</li> <li>working on a team</li> <li>medical lab research</li> <li>making a contribution to society</li> <li>working with numbers</li> <li>developing conclusions from a database</li> </ul>

Science and Health Pathway Courses			
Adventure Activity	Dental Assisting (CTC)	Optimal Performance	
Anatomy & Physiology	Emergency Medical	Pastry Arts (CTC)	
Animal Science	Technician	Physics I and II	
AP Biology	<ul> <li>Environmental Ecology</li> </ul>	PIAA Sports Officiating	
AP Calculus	FFA & Leadership	Plant Science	
AP Environmental Science	<ul> <li>Food Science</li> </ul>	Pre-Calculus	
AP Statistics	• Forensic Science	Physical Science	
AP Physics I: Algebra-Based	<ul> <li>Global Cuisine</li> </ul>	Probability & Statistics	
Biology	<ul> <li>Health</li> </ul>	Production Agriculture	
Chemistry I, II	<ul> <li>Health Careers Technology</li> </ul>	Sports Therapy Sciences	
Chemistry in Agriculture	(CTC)	(CTC)	
Cooking Light and Easy	<ul> <li>Human Development</li> </ul>	Strength Training	
Culinary Arts (CTC)	<ul> <li>Instrumental Analysis</li> </ul>	Supervised Agriculture	
Culinary Café	<ul> <li>Introduction to Agriculture</li> </ul>	Experience (SAE)	
Culinary Chemistry	Science	Wildlife & Forestry	
Creative Movement I, II	<ul> <li>Medical Assistant (CTC)</li> </ul>	Management	
,	<ul> <li>Nutrition and Food Science</li> </ul>	World Language	

**Health Science Occupations** 

Highest Paying	Fastest Growing	Most Employed
<ul> <li>Anesthesiologists</li> <li>Obstetricians and Gynecologists         Anesthesiologists     </li> <li>Orthodontists</li> </ul>	<ul> <li>Physician Assistants</li> <li>Physician Assistants</li> <li>Anesthesiologist Assistants</li> <li>Epidemiologists</li> </ul>	<ul> <li>Acute Care Nurses</li> <li>Clinical Nurse Specialists</li> <li>Advanced Practice     Psychiatric Nurses</li> <li>Clinical Care Nurses</li> </ul>

**Agriculture, Food, and Natural Resource Occupations** 

Agriculture, rood, and Matarar Resource occupations			
Highest Paying	Fastest Growing Most Employed		
<ul> <li>Clinical Research         Coordinators</li> <li>Natural Science         Managers</li> <li>Water Resource         Specialists</li> <li>Environmental         Engineers</li> </ul>	<ul> <li>Animal Caretakers</li> <li>Refuse and Recyclable Materials Collectors</li> <li>Farm Equipment Mechanics and Service Technicians</li> </ul>	<ul> <li>Farmers, Ranchers, and Agricultural Managers</li> <li>Farmworkers and Laborers</li> <li>Water/Wastewater Engineers</li> <li>Farmworkers, Farm, Ranch, and Aquacultural Animals</li> </ul>	

**Scientific Research/Engineering Occupations** 

Highest Paying	Fastest Growing	Most Employed
<ul> <li>Architectural and Engineering Managers</li> <li>Biofuels/Biodiesel Technology and Product Development Managers</li> <li>Physicists</li> <li>Aerospace Engineers</li> </ul>	<ul> <li>Statisticians</li> <li>Biostatisticians</li> <li>Computer and Information Research Specialists</li> <li>Validation Engineers</li> </ul>	<ul> <li>Mechanical Engineers</li> <li>Automotive Engineers</li> <li>Fuel Cell Engineers</li> <li>Validation Engineers</li> </ul>

### Sample Course Planning Guides

The following course planning guides are provided to assist students in developing a four-year course plan that will prepare them to pursue the post-secondary training needed to fulfill their career goals. The samples provided on the following pages are recommendations of how students should structure their course selections in order to meet graduation requirements and prepare for their career goals and related education. The sample planning guides also reflect the courses that students need to take sequentially in each core academic subject area. Additional information regarding these sequential courses may be found in the department listings in the *Educational Planning Guide*.

Students will enroll in six credits per school year. Band and chorus will be offered during a flex period and will be scheduled in addition to the six credits.

The "elective" courses indicated on each course plan reflect either .5 credit semester courses or may be combined (as illustrated by the dotted line) as a 1 credit, year-long course. Each curricular department offers a variety of courses for students to select.

#### Standard Course Plan to Meet Graduation Requirements

9th Grade	10th Grade	11th Grade	12th Grade
Lit, Analysis, and Comp I	Lit, Analysis, and Comp II	Lit, Analysis, and Comp III	Lit, Analysis, and Comp IV
U.S. History III	Modern American Studies	Global Studies and	Elective
	and Government	Geography	Elective
Math	Math	Math	Elective
Matii	Matii	Matii	Elective
Biology or Principles of	Chemistry or	Science	Elective
Scientific Inquiry	Biology	Science	Elective
PE 9 & Freshmen Seminar	Health & Driver's Ed	PE Choice	PE Choice
Elective	Elective	Elective	Elective
Elective	Elective	Elective	Elective
Elective	Elective	Elective	Elective

#### Four-Year College Preparatory Course Plan

9th Grade	10th Grade	11th Grade	12th Grade
Lit, Analysis, and Comp I	Lit, Analysis, and Comp II	Lit, Analysis, and Comp III	Lit, Analysis, and Comp IV
U.S. History III	Modern American Studies and Government	Global Studies and Geography	Social Studies Elective or Choice
Math	Math	Math	Math
Biology	Chemistry	Physics	Science Choice
PE 9 & Freshmen Seminar	Health & Driver's Ed	PE Choice	PE Choice
Elective	Elective	Elective	Elective
Elective	Elective	Elective	Elective
Elective	Elective	Elective	Elective

The college preparatory curriculum is designed for students who intend to enroll in a higher education program after high school graduation. Students need to carefully consider the particular type of program that they wish to pursue and the institutions to which they intend to apply. It is the responsibility of students planning to enter college to complete a program of studies that will qualify them for admission. Admission requirements vary by post-secondary institution. Program planning should be made in consultation with parents, teachers, and counselors.

For a student planning to enter a four-year college, it is strongly recommended that students complete the minimum credits in each academic area:

- · English- 4 credits
- Social Studies- 4 credits
- Mathematics- 4 credits
- · Science 4 credits (minimum 2 credits of a lab science)
- · World Language- 2 credits of the same language

## Career & Technology Center Two-Year, Half-Day Program Course Plan

9th Grade	10th Grade	11th Grade	12th Grade
Lit, Analysis, and Comp I	Lit, Analysis, and Comp II	Lit, Analysis, and Comp III	Lit, Analysis, and Comp IV
Math	Math	Math	Elective
U.S. History III	Modern American Studies and Government	Global Studies and Geography OR Science	СТС
Biology or Principles of Scientific Inquiry	Chemistry or Biology	СТС	Science OR Global Studies and Geography
PE 9 & Freshmen Seminar	Health & Driver's Ed	СТС	СТС
Elective	PE Choice	Contract PE	PE
Elective	Elective	CTC	CTC
Elective	Elective	CTC	CTC

Students enrolled in a two-year, half-day CTC program must complete their third credit in Social Studies or Science during either their junior or senior year. One of these courses must be scheduled in conjunction with English and Math during the junior year. The remaining required core credit must be scheduled during the student's senior year.

Half-day CTC may fulfill .5 credit by Contract PE. The remaining .5 credit to fulfill PE requirements must be completed through an in-person PE course at ELCO High School. Individual extenuating circumstances will be considered, such as students who need to complete a core course to fulfill graduation requirements.

# Career & Technology Center One-Year, Full-Day Program Course Plan

9th Grade	10th Grade	11th Grade	12th Grade
Lit, Analysis, and Comp I	Lit, Analysis, and Comp II	Lit, Analysis, and Comp III	CTC English
U.S. History III	Modern American Studies and Government	Global Studies and Geography	
Math	Math	Math	
Biology or Principles of Scientific Inquiry	Chemistry or Biology	Science Choice	CTC Full-Day Program
PE 9 & Freshmen Seminar	Health & Driver's Ed	PE Choice	
Elective	PE Choice	Elective	
Elective	Elective	Elective	
Elective	Elective	Elective	CTC Math

# **Post-Secondary Opportunities**

Туре	Description	
On-the-Job Training	Employer-designed training established for the worker to gain the necessary work skills while he/she is getting paid on the job.	
Diploma or Certificate Program	Short-term programs of 6 months to 1 year to acquire specific skills in order to gain employment at the entry level. These programs may be found at technical schools, community colleges, junior college, and even some universities.	
Military Training	All branches of the military have skilled training for 3 years or more. Students can use their GI Bill to pay for college after their discharge or serve for 20 years until retirement with full benefits.	
Associate Degree Programs	These are terminal 2-year degrees that enable the individual to gain entry-level employment in a specific career. Often, these workers will begin employment after 2 years of school and then obtain future degrees at the employer's expense. Typical locations are community and junior colleges. Some technical school and most universities have some associate degree programs.	
Bachelor Degree Programs	These are four-year degrees with a combination of general education course work and specific major. They can be liberal arts colleges, private colleges, public colleges, or universities.	
Graduate and Professional Degree Programs	These are the post-graduate fields such as law, medicine, and Ph.D. or other professional fields, typically 1 to 5 years beyond a bachelor's degree.	

## **Post-Secondary Resources**

## College Planning

Big Future (CollegeBoard) <a href="https://bigfuture.collegeboard.org">https://bigfuture.collegeboard.org</a>

Education Planner (PHEAA) www.educationplanner.org

NCAA Eligibility Center <a href="https://web3.ncaa.org/ecwr3">https://web3.ncaa.org/ecwr3</a>

## College Entrance Exams and Preparation

ACT <u>www.act.org</u>

SAT <u>sat.collegeboard.org/home</u>

Khan Academy www.khanacademy.org

## **Career Exploration**

PA Career Zone <u>www.pacareerzone.org</u>

O\*NET OnLine <u>www.onetonline.org</u>

My Next Move <u>www.mynextmove.org</u>

Bureau of Labor Statistics www.bls.gov

PA Dept. Labor & Industry <u>www.dli.pa.gov</u>

## Financial Aid/Scholarships

Federal Student Aid (USDE) www.studentaid.gov

PHEAA www.pheaa.org

## Post-Secondary Planning

myFUTURE <u>www.myfuture.com</u>

Naviance https://student.naviance.com/eastlebcs

Transition Resources <a href="https://www.pasecondarytransition.com">https://www.pasecondarytransition.com</a>

## AGRICULTURE SCIENCE AND TECHNOLOGY

Students must be enrolled in an Agriculture class each year to maintain membership in FFA as required by National & State FFA and Agriculture Education guidelines.

**Agriculture Mechanics (HS551)** 

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.00 (Level I)

Prerequisite: Introduction to Agriculture or teacher approval

This course will cover the agriculture mechanics careers, orientation, personal safety, lab organization, safe use of machines and power tools, project planning layout procedures, marking, cutting and bending metal, proper tool fitting, principles of electricity and electrical wiring in agriculture, operation, trouble shooting, repair of electric motors, plumbing technology and insulation, principles of hydraulics, concrete and masonry technology, design, and construction. The topics of welding and use of the Plasma Cutter and advanced small gas engine operation and troubleshooting will also be covered. Students will be guided through SAFE machine operation and are required to demonstrate all safe operating procedures.

## **Animal Science (HS512)**

Grade Level: 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

Prerequisite: Any Agriculture course or teacher approval Concurrent enrollment in SAE Independent Study is required.

Students will learn the basics of horse, dog, cat and other small animal care. Course topics will also cover the basics of genetics, anatomy and animal rights. This course includes guest speakers and some out of classroom experiences. Students will learn about career opportunities and gain handson experience. All students will be required to care for a small animal. *This course is offered in alternating years and will NOT be offered during the 2024-2025 school year.* 

#### Commercial Driver's License (CDL) Training (HS589)

Grade Level: 12 Length of Course: 90 days Credits: .5 Weight: 1.00 (Level I)

Prerequisite: Counselor/teacher recommendation; valid Pennsylvania Driver's License; 18 years of age

or older by start of course

This course is an elective to help students obtain the knowledge to help them enter the transportation field. D.R.I.V.E. stands for Driving Resources and Innovation in Vehicular Education. During the class, students will be instructed in the skills and certifications to obtain a job in the logistic field. Some of the skills will include: Forklift Certification, General Test Preparation for a Commercial Driver License (CDL), Transporting Cargo, Transporting Passengers, Air Brakes, Combination Vehicles. Students will be exposed to all requirements and regulations to obtain a CDL Class A or B permit and gain simulator experience driving Class A truck, Class B vehicle, fire truck and passenger bus (coach and school buses). Students will be trained and certified on OSHA regulations on how to operate a forklift and earn a safety certificate that is recognized by the transportation industry.

#### FFA & Leadership (HS503)

Grade Level: 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

Prerequisite: Any Agriculture course or teacher approval Concurrent enrollment in SAE Independent Study is required.

In this course, students will learn about the National FFA Organization through an in-depth look of the history and timeline of the organization. Students will use the Official FFA Manual as a guide to learning about the organization and all of the opportunities it has to offer. Students will gain knowledge of proper parliamentary procedure etiquette to efficiently and effectively conduct business meetings. Students will also attain valuable leadership, problem solving, and communication skills. Throughout this course, students will have the opportunity to participate in FFA competitions, events, and other various projects. It is highly recommended that all students in this course are members of the FFA, are FFA Officers, or are students interested in becoming an FFA Officer.



## Food Science (HS513)

Grade Level: 9, 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

Prerequisite: Introduction to Agriculture Science or teacher approval

Students will complete hands-on activities, projects, and problems that simulate actual concepts and situations in the food science and safety industry. Students will build content knowledge and technical skills while investigating areas of food science, including food safety, food chemistry, food processing, sensory evaluation, food product development, and marketing. Students in this course will start by gaining an understanding of what food is by identifying the biological and chemical compounds that make foods look the way they do, taste the way they do, and react the ways they do when people prepare or process them in various ways. Students will also complete the ServSafe certification as an industry recognized credential.

#### **Introduction to Agriculture Science (HS501)**

Grade Level: 9, 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

This course is a prerequisite for all other classes in the Agriculture department and is intended to introduce students to the broad area of agriculture. Topics will include general United States and Pennsylvania agriculture, FFA, plant science, animal science, public speaking, Ag Business, and careers in agriculture. Students will be required to care for an animal in this course and to keep records on their care in order to learn how to keep Supervised Agriculture Experience records for future Agriculture courses. Students will also grow plants in this course. Food labs will also be included in the course. The facilities include an aquaculture (fish room), small animal lab, shop, greenhouse and classroom.

## Plant Science (HS511)

Grade Level: 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

Prerequisite: Any Agriculture course or teacher approval Concurrent enrollment in SAE Independent Study is required.

This course introduces students to the many areas of horticulture and plant science. Course topics include plant identification, greenhouse & nursery production, floral design, landscaping, pest management, and career opportunities in plant systems. Students will grow and propagate plants, maintain and manage a greenhouse, develop hydroponic growing systems, and design their own horticulture landscapes. There are plant identification walks in this course along with other outdoor activities. *This course is offered in alternating years and WILL be offered during the 2024-2025 school year.* 

## **Production Agriculture (HS506)**

Grade Level: 10, 11, 12

Length of Course: 90 days
Credits: .5

Weight: 1.00 (Level I)

Prerequisite: Any Agriculture course or teacher approval Concurrent enrollment in SAE Independent Study is required.

This course introduces students to the many areas of production agriculture with an emphasis on production of America's food supply. Students will complete units on soil science and crop production. Students will also learn the basics of swine, beef, dairy, poultry, goat, and sheep production. Students will also learn the basics of an agribusiness enterprise. There will be food labs, guest speakers and some out of classroom experiences. *This course is offered in alternating years and WILL be offered during the 2024-2025 school year.* 

#### Supervised Agriculture Experience Independent Study (SAE) (HS510)

Grade Level: 10, 11, 12

Length of Course: 90 days
Credits: .5

Weight: 1.00 (Level I)

Prerequisite: Any Agriculture course or teacher approval.

An SAE program is the hands-on application of concepts and principles learned in the agriculture classroom. Students are supervised by agriculture education teachers, parents, employers and/or other adults who assist in student development and achievement of their career goals. Students may complete any of the approved projects listed by the National FFA Proficiency areas and must keep an accurate Pennsylvania FFA Organization Record Book. The types of SAE programs are Exploratory/Foundational, Research, Placement (paid and unpaid) and Entrepreneurship. Students will need to schedule and meet with the instructor twice per month to review progress. The instructor will visit projects as needed. *All students enrolled in upper level Agriculture courses are required to enroll in this course.* 

## Welding and Industrial Machining (HS562)

Grade Level: 9, 10, 11, 12

Length of Course: 90 days

Credits: .5

Weight: 1.00 (Level I)

Students will learn the welding and industrial machining processes, while designing and fabricating various metal working projects.

Welding processes	Machining	
Stick – shielded metal arc welding (SMAW)	• Mill	
<ul> <li>MIG – gas metal arc welding (GMAW)</li> </ul>	Lathe	
<ul> <li>TIG – gas tungsten arc welding (GTAW)</li> </ul>	CNC plasma Cam programming	

Students will be guided through SAFE machine operation and are required to demonstrate all safe operating procedures.

#### Wildlife & Forestry Management (HS508)

Grade Level: 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

Prerequisite: Any Agriculture course or teacher approval Concurrent enrollment in SAE Independent Study is required.

This course covers the topics of wildlife and forestry management, which includes the study of animals common to Pennsylvania. Students will learn the history of wildlife conservation in America, endangered species and the conservation methods used today including hunting. Students will also learn about wildlife habitats and careers. The course also addresses the basic principles of forestry including tree identification, forest ecology, forest management, wood identification, and forest pests. The aquatics portion of the course includes aquatic life identification, lake behavior, watersheds and water pollution. Students will learn about career opportunities in both areas. This course may include some outdoor instruction. *This course is offered in alternating years and will NOT be offered during the 2024-2025 school year.* 

## **ART**

Art I (HS601)

Grade Level: 9, 10, 11, 12

Length of Course: 90 days
Credits: .5

Weight: 1.00 (Level I)

Art I is a course that builds on students' knowledge of the elements and principles of design, which are essential when creating and assessing two and three-dimensional art. Creative problem solving, learning new techniques, and creating with a variety of materials is emphasized. Areas of study include color theory, drawing, painting, design, art history, art criticism, and aesthetics.

Art II (HS602)

Grade Level: 10, 11, 12

Length of Course: 90 days
Credits: .5

Weight: 1.00 (Level I)

Prerequisite: Art I (80% or higher)

Skills from Art I will be expanded upon in an advanced understanding and application of art design principles to the creative problem-solving process. Students will gain knowledge of the four tenants that drive this course: Art Production, Art Criticism, Art History, and Aesthetics.

Art III (HS603)

Grade Level: 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.03 (Level II)

Prerequisite: Art I and Art II (80% or higher)

Finding and creating meaning in art and increasing advanced technical skills are learned. Students are expected to challenge their "known" abilities and build upon their skills and strengths. Time management and teacher-to-student dialogue will be an important piece to developing and understanding creative works.

#### Independent Art (HS610)

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.03 (Level II)

Prerequisite: Art I, Art II, Art III (80% or higher), or Pottery I, Pottery II (80% or higher), and/or teacher

approval

This course is designed for the very serious art honor student who has time within his or her schedule to take this independent course in their senior year. Individual artistic development is expected, and creative problems and goals will be developed with instructor approval and guidance. Students will be expected to form a culminating digital portfolio at the end of the course.

## Portfolio (HS611)

Grade Level: 12 Length of Course: 90 days Credits: .5 Weight: 1.06 (Level III)

Prerequisite: Art I, Art II, Art III (80% or higher) and/or teacher approval

The Portfolio course is designed for senior art honor students who intend to pursue a post-secondary education in art, or the serious art honor student who wishes to continue his/her artistic development. Students will be expected to form a culminating digital portfolio at the end of the course.

#### Pottery I (HS620)

Grade Level: 9, 10, 11, 12

Length of Course: 90 days

Credits: .5

Weight: 1.00 (Level I)

Prerequisite: Art I (80% or higher)

In the beginning pottery class, students will learn several different hand building techniques. These will include pinch pots, coil, and slab building methods. Students will also explore different surface design techniques and ideas, and glazing will be introduced. Individual creativity within each of the techniques will be encouraged. Students will produce both functional as well as sculptural pieces. Students will learn about the historical development of pottery produced by artisans and by various cultures while using the critical process to discuss and evaluate their own work in addition to master works in clay.

### Pottery II (HS621)

Grade Level: 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

Prerequisite: Pottery I (80% or higher)

Pottery II will provide students the opportunity to develop wheel and advanced hand building skills as they continue to study the historical and cross-cultural development of pottery styles and techniques. Art criticism and aesthetic issues related to form and function, the inherent expressive qualities of clay and the identification of good craftsmanship and design will continue to be an ongoing part of the curriculum.

#### Printmaking (HS606)

Grade Level: 9, 10, 11, 12

Length of Course: 90 days

Credits: .5

Weight: 1.00 (Level I)

Prerequisite: Art I (80% or higher)

Printmaking is a studio art course in which students will learn about different types of traditional and contemporary printmaking processes. Throughout the semester, students will have the opportunity to create images using a variety of printmaking techniques and processes. Projects will include linoleum printing, collographs, and monoprinting.

## **BUSINESS AND COMPUTER TECHNOLOGY**

**Accounting IA (HS716)** 

Grade Level: 10, 11, 12

Length of Course: 90 days

Credits: .5

Weight: 1.00 (Level I)

Prerequisites: General Business recommended.

Accounting IA prepares students to develop the ability to analyze and record financial transactions and interpret the results of personal and business operations from a financial standpoint. Students gain a wide background in personal and business organization, procedures, and related technology. *Any student interested in pursuing a degree in business should complete Accounting IA, IB, and II.* 

#### **Accounting IB (HS717)**

Grade Level: 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

Prerequisites: Accounting I or IA (70% or higher)

Accounting IB continues to introduce students to various business transactions focusing on more complex business structures. Students will focus on automated practices and accounting simulations. *Any student interested in pursuing a degree in business should complete Accounting IA, IB, and II.* 

#### Accounting II (HS712)

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.03 (Level II)

Prerequisites: Accounting IB (80% or higher)

Accounting II provides an opportunity for students to apply basic accounting principles to a variety of accounting systems and methods via independent study. Accounting problems of greater depth provide an excellent academic challenge to the advanced accounting student. Students interested in pursuing a degree in accounting or similar profession should complete the sequence of accounting courses. *Any student interested in pursuing a degree in business should take Accounting IA, IB, and II.* 

Accounting III (HS713)

Grade Level: 12 Length of Course: 90 days Credits: .5 Weight: 1.03 (Level II)

Prerequisites: Accounting II (80% or higher)

Accounting III offers the opportunity for an individual to continue to apply advanced accounting principles to a variety of accounting systems and methods and provides an excellent academic challenge for the advanced accounting student. This independent study course is designed to prepare students to excel in their beginning accounting courses in college. Students interested in pursuing a degree in accounting or a similar profession should complete the sequence of Accounting courses.

#### **AP Computer Science Principles (HS728)**

Grade Level: 11, 12 Length of Course: 180 days Credits: 1.0 Weight: 1.12 (Level IV)
Suggested Prerequisites: Computer Applications (80% or higher) and Web Design I (80% or higher)

The AP Computer Science Principles course focuses on the computer science skills that are in high demand and valued by colleges and employers. The course will cover a broad range of computer science topics, including programming, algorithms, the Internet, big data, digital privacy and security, and the societal impacts of computing. This course seeks to provide students with a "future proof" foundation in computing principles so they are adequately prepared with both the knowledge and skills to live and meaningfully participate in our increasingly digital society, economy, and culture.

#### Animation (HS723)

Grade Level: 9, 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

Students will explore techniques used in creating animation using standard software. This course will enhance skill development in storyboarding and animation. Students will work individually and cooperatively in a project-based environment.

#### **Business Math (HS734)**

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.00 (Level I)

This course is designed for students to have the opportunity to understand mathematics in the context of business and finance. Students will gain insight into the mathematic principles associated with business operations and personal finance.

### **Career Connections (HS714)**

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.00 (Level I)

This course is designed to help students begin to plan for their future and develop skills needed to experience personal success. Students focus on developing their communication, time management, and human relation skills while exploring their individual aptitudes and interests to determine possible career paths. Finally, the course culminates with learning 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.

## **Leadership in Action (HS718)**

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.00 (Level I)

Leadership in Action is designed to empower high school students to make a positive change in their community through the development and implementation of a service project. Students will develop personal leadership skills and partake in team building strategies, while they research needs of our local community. Project implementation will include developing a team vision, anticipating barriers, marketing the change, measuring outcomes, and then sharing their story. Students will enter the Lead4Change challenge and will be awarded honor cords to wear at graduation for completion of the course.

#### **Computer Applications (HS720)**

Grade Level: 9, 10, 11, 12

Length of Course: 90 days
Credits: .5

Weight: 1.00 (Level I)

This course will introduce students to a variety of computer programs and concepts including desktop publishing, spreadsheets, photo editing/drawing, and web graphics. The skills learned in this course can be easily applied to other programs, classes, and real-life situations. Students are not expected to have prior knowledge of the course's programs but will have more than a basic understanding of multiple programs at the conclusion of the course.

#### Computer Graphics (HS724)

Grade Level: 9, 10, 11, 12

Length of Course: 90 days
Credits: .5

Weight: 1.00 (Level I)

Prerequisites: Computer Applications (80% or higher)

Students are expected to have prior Adobe Create Suite knowledge and the ability to execute basic functions. Students will utilize the Adobe Create Suite to complete individual design projects. Emphasis will be placed on advanced concepts to create personal and professional design. Students are expected to be able to create and work independently on projects that will last multiple days.

## Digital Video (HS725)

Grade Level: 9, 10, 11, 12

Length of Course: 90 days

Credits: .5

Weight: 1.00 (Level I)

Introduces students to the basics of postproduction non-linear digital video editing for multimedia, videos and web capabilities. Students will produce, edit, and optimize video using editing software. Upon completion of the course students will be able to create and produce digital videos.

## Entrepreneurship (HS732)

Grade Level: 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

Prerequisites: Accounting IA/IB recommended

Students enrolling in this course will explore a variety of entrepreneurial topics. The course begins by determining the skills necessary to find success as an entrepreneur by researching stories of several famous entrepreneurs. They will also develop an understanding of entrepreneurial concepts and strategies and how they can use their unique skills and talents to start a small business venture. The course addresses topics critical in the planning process including general operations, financing, marketing, and human resource issues. The course culminates with the creation and presentation of a student generated business plan.

#### Foundations of Coding (HS727)

Grade Level: 9, 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

This course will provide students with the foundational computer programming skills that are in high demand and valued by colleges and employers. The course will cover a broad range of computer science topics, including basic programming and data science. Students will learn versatile programming language for coding that may be applied in various scenarios. Learning the fundamentals of coding and computer science strengthens students' problem-solving skills and expands their worldview of how computing and technology impacts our society.

#### Freshmen Seminar (HS701)

Grade Level: 9 Length of Course: 45 days Credits: .25 Weight: 1.00 (Level I)

Students will explore career paths and choices to recognize if a career choice will allow for the development of the student's natural talents and interests. Students will demonstrate readiness to enter the world of work by exhibiting the qualities of a good employee, such as good attendance, timeliness of task completion, ethical behavior, self- motivation, and behaving in a professional manner. This course is required for all ninth-graders and alternates every other day with Physical Education 9 for one semester.

#### **General Business (HS730)**

Grade Level: 9, 10 Length of Course: 90 days Credits: .5 Weight: 1.00 (Level I)

General Business will acquaint students with the American business system. Throughout the course, students will learn a variety of business concepts including managing checking and savings accounts, consumer purchasing, economics, and business structures. This course is an excellent starting point for students who are considering a career in business.

#### Marketing (HS733)

Grade Level: 10, 11, 12

Length of Course: 90 days
Credits: .5

Weight: 1.00 (Level I)

Prerequisites: General Business recommended

Students will study economic functions at work in the marketplace and marketing functions including purchasing, pricing, and distribution functions. Emphasis will be placed on communication skills, economics, financial analysis, and promotion. Exposure to career opportunities in the field of marketing and specific topics will be covered, including advertising, selling skills and promotion.

#### Personal Finance (HS731)

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.00 (Level I)

Personal Finance is a course designed to help students understand the impact of individual choices on occupational goals and future earning potential. Real world topics covered will include income, money management, spending and credit, as well as saving and investing. Students will design personal and household budgets utilizing checking and savings accounts, gain knowledge in finance, debt and credit management, and evaluate and understand insurance and taxes. This course will provide a foundational understanding for making informed personal financial decisions leading to financial independence.

## **Technology Exploration (HS729)**

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.06 (Level III)

Prerequisites: Teacher recommendation only.

Students will have the opportunity to enhance their computer knowledge and skills by participating in advanced technology projects. Projects may include animation concepts and design as well as videography. Students will be responsible for identifying their projects based on individual interests as they relate to technology. This course is presented in an independent study format and will be supplemented with classroom instruction. Students must obtain teacher approval for enrollment.

#### Web Design I (HS721)

Grade Level: 9, 10, 11, 12

Length of Course: 90 days
Credits: .5

Weight: 1.00 (Level I)

This course is designed to introduce high school students to various skills, methods, and techniques related to basic web design including HTML coding, CSS (cascading style sheets), and image

related to basic web design including HTML coding, CSS (cascading style sheets), and image optimization. Students will be required to utilize several learned web design skills as well as real-life aptitudes such as reading, writing, creativity, self-expression, problem solving, attention to detail, work ethic, and communication skills. The focus of this class will be production (the actual creation of web pages and web sites); however, attention will also be focused on design (the organization or structure of formal elements in a composition/the combination of details or features of a composition).

#### Web Design II (HS722)

Grade Level: 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

Prerequisites: Web Design I (80% or higher)

Students will have the opportunity to enhance their computer knowledge and skills by learning advanced design techniques with coding. The goal of this course is to provide students with the study of advanced topics in web design. Topics include the web development process, advanced layout and design features, advanced study of scripting languages, site development with HTML editors, and web servers and databases. This course is presented in an independent study format and supplemented with classroom instruction.

# **ENGLISH LANGUAGE ARTS**

GRADE 9	GRADE 10	GRADE 11	GRADE 12		
Literature, Analysis, and	Literature, Analysis, and	AP Language and	AP Literature and		
Composition I - Honors	Composition II - Honors	Composition	Composition		
		OR	OR		
		AP Seminar	AP Language and		
		OR	Composition		
		Literature, Analysis, and	OR		
		Composition III - Honors	AP Seminar		
			OR		
			AP Research		
Literature, Analysis, and	Literature, Analysis, and	Literature, Analysis, and	Literature, Analysis, and		
Composition I - CP	Composition II – CP	Composition III – CP	Composition IV - CP		
Literature, Analysis, and	Literature, Analysis, and	Literature, Analysis, and	Literature, Analysis, and		
Composition I - Applied	Composition II - Applied	Composition III –	Composition IV -		
		Applied	Applied		
ELECTIVES 9 – 12					
Yearbook / Journalism I					
Yearbook / Journalism II					
Yearbook Journalism Management					
Television and Film Production I					
<ul> <li>Television and Film Production II</li> </ul>					
<ul> <li>Television and Film Production Management</li> </ul>					

## Literature, Analysis, and Composition I (LAC) – Honors (HS011)

Grade Level: 9 Length of Course: 180 days
Credits: 1 Weight: 1.06 (Level III)

Prerequisite: 8<sup>th</sup> Grade English (80% or higher), Proficient or Advanced score on the 8<sup>th</sup>-grade English

Language Arts PSSA, and teacher recommendation

This fast-paced course is designed to meet the needs of highly motivated students who demonstrate exceptional abilities in the study of English. Students who select this course are expected to read longer passages of text, comprehend text independently, and analyze text accurately. Reading selections are comprised of both fiction and non-fiction pieces organized to analyze the themes of empathy, leadership, dreams and aspirations, and relationships. Emphasis is given to the skills of comprehension, vocabulary acquisition, making connections among ideas and between texts with a focus on textual evidence. Students will engage in multiple stages of the writing process and produce works in a variety of styles. Students are expected to write in response to literature as well as conduct research in order to compose work that clearly conveys a well-defined perspective and use of appropriate content. Fulfillment of a summer reading requirement is necessary prior to commencement of the course. Information will be posted on the High School webpage.

#### Literature, Analysis, and Composition I (LAC) - College Prep (HS012)

Grade Level: 9 Length of Course: 180 days Credits: 1 Weight: 1.03 (Level II)

This course is designed to meet the needs of students who plan to pursue post-secondary studies. Reading selections are comprised of both fiction and non-fiction pieces organized to analyze the themes of empathy, leadership, dreams and aspirations, and relationships. Emphasis is given to the skills of comprehension, vocabulary acquisition, making connections among ideas and between texts with a focus on textual evidence. Students will engage in multiple stages of the writing process and produce works in a variety of styles. Students are expected to write in response to literature as well as conduct research in order to compose work that clearly conveys a well-defined perspective and use of appropriate content. Fulfillment of a summer reading requirement is necessary prior to commencement of the course. Information will be posted on the High School webpage.

## Literature, Analysis, and Composition I (LAC) – Applied (HS013)

Grade Level: 9 Length of Course: 180 days Credits: 1 Weight: 1.00 (Level I)

This course is designed to meet the needs of students who are interested in becoming career ready. Reading selections are comprised of both fiction and non-fiction pieces organized to analyze the themes of empathy, leadership, dreams and aspirations, and relationships. Emphasis is given to the skills of comprehension, vocabulary acquisition, making connections among ideas and between texts with a focus on textual evidence. Students will engage in multiple stages of the writing process and produce works in a variety of styles. Students are expected to write in response to literature as well as conduct research in order to compose work that clearly conveys a well-defined perspective and use of appropriate content. *Fulfillment of a summer reading requirement is necessary prior to commencement of the course. Information will be posted on the High School webpage.* 

## Literature, Analysis, and Composition II (LAC) – Honors (HS021)

Grade Level: 10 Length of Course: 180 days
Credits: 1 Weight: 1.06 (Level III)
Prerequisites: Honors Literature, Analysis, and Composition I (80% or higher); Proficient or Advanced

score on the 8<sup>th</sup>-grade English Language Arts PSSA or teacher recommendation

This fast-paced course is designed to meet the needs of high achieving English students who follow the Advanced Placement track, meet the prerequisite, and receive recommendation from the previous year's English teacher. Students who select this course are expected to read longer passages of text, comprehend text independently, and analyze text accurately. Reading selections are comprised of both fiction and non-fiction pieces organized to analyze the themes of destiny, taking a stand, technology, and the human connection. Emphasis is given to the skills of comprehension, vocabulary acquisition, making connections among ideas and between texts with a focus on textual evidence. Students will engage in multiple stages of the writing process and produce works in a variety of styles. Students are expected to write in response to literature as well as conduct research in order to compose work that clearly conveys a well-defined perspective and use of appropriate content.

## <u>Literature, Analysis, and Composition II (LAC) – College Prep (HS022)</u>

Grade Level: 10 Length of Course: 180 days Credits: 1 Weight: 1.03 (Level II)

This course is designed to meet the needs of students who plan to pursue post-secondary studies. Reading selections are comprised of both fiction and non-fiction pieces organized to analyze the themes of destiny, taking a stand, technology, and the human connection. Emphasis is given to the skills of comprehension, vocabulary acquisition, making connections among ideas and between texts with a focus on textual evidence. Students will engage in multiple stages of the writing process and produce works in a variety of styles. Students are expected to write in response to literature as well as conduct research in order to compose work that clearly conveys a well-defined perspective and use of appropriate content.

#### Literature, Analysis, and Composition II (LAC) – Applied (HS023)

Grade Level: 10 Length of Course: 180 days Credits: 1 Weight: 1.00 (Level I)

This course is designed to meet the needs of students who are interested in becoming career ready. Reading selections are comprised of both fiction and non-fiction pieces organized to analyze the themes of destiny, taking a stand, technology, and the human connection. Emphasis is given to the skills of comprehension, vocabulary acquisition, making connections among ideas and between texts with a focus on textual evidence. Students will engage in multiple stages of the writing process and produce works in a variety of styles. Students are expected to write in response to literature as well as conduct research in order to compose work that clearly conveys a well-defined perspective and use of appropriate content.

## Literature, Analysis, and Composition III (LAC) – Honors (HS034)

Grade Level: 11 Length of Course: 180 days
Credits: 1 Weight: 1.06 (Level III)
Prerequisites: Literature, Analysis, and Composition II – Honors (80% or higher) and a Proficient or

Advanced score on the Literature Keystone Exam or teacher recommendation

This fast-paced course is designed to meet the needs of high achieving English students who are following the Advanced Placement track, meet the prerequisite, and receive recommendation by the previous year's English teacher. Students who select this course are expected to read longer passages of text, comprehend text independently, and analyze text accurately. Reading selections are comprised of both fiction and non-fiction pieces from American Literature, specifically addressing the concepts of we the people, the individual, modern times, and relationships. Emphasis is given to the skills of comprehension, vocabulary acquisition, making connections among ideas and between texts with a focus on textual evidence. Students will engage in multiple stages of the writing process and produce works in a variety of styles. Students are expected to write in response to literature as well as conduct research in order to compose work that clearly conveys a well-defined perspective and use of appropriate content.

## <u>Literature</u>, Analysis, and Composition III (LAC) – College Prep (HS035)

Grade Level: 11 Length of Course: 180 days Credits: 1 Weight: 1.03 (Level II)

This course is designed to meet the needs of students who plan to pursue post-secondary studies. Reading selections are comprised of both fiction and non-fiction pieces from American Literature, specifically addressing the concepts of we the people, the individual, modern times, and relationships. Emphasis is given to the skills of comprehension, vocabulary acquisition, making connections among ideas and between texts with a focus on textual evidence. Students will engage in multiple stages of the writing process and produce works in a variety of styles. Students are expected to write in response to literature as well as conduct research in order to compose work that clearly conveys a well-defined perspective and use of appropriate content.

#### Literature, Analysis, and Composition III (LAC) – Applied (HS036)

Grade Level: 11 Length of Course: 180 days Credits: 1 Weight: 1.00 (Level I)

This course is designed to meet the needs of students who are interested in becoming career ready. Reading selections are comprised of both fiction and non-fiction pieces from American Literature specifically addressing the concepts of we the people, the individual, modern times, and relationships. Emphasis is given to the skills of comprehension, vocabulary acquisition, making connections among ideas and between texts with a focus on textual evidence. Students will engage in multiple stages of the writing process and produce works in a variety of styles. Students are expected to write in response to literature as well as conduct research in order to compose work that clearly conveys a well-defined perspective and use of appropriate content.

## Literature, Analysis, and Composition IV (LAC) – College Prep (HS042)

Grade Level: 12 Length of Course: 180 days Credits: 1 Weight: 1.03 (Level II)

This course is designed to prepare students for the current and projected demands of a global, knowledge based 21st century society. Emphasis will be placed on developing the analytic and communication skills necessary for the college-bound student to be successful in the fast-paced world of post-secondary academia. Students will engage with course content organized to analyze the themes of the epic hero, the human condition, an exchange of ideas, and/or emotional currents.

#### Literature, Analysis, and Composition IV (LAC) – Applied (HS043)

Grade Level: 12 Length of Course: 180 days Credits: 1 Weight: 1.00 (Level I)

This course is designed to prepare students for the current and projected demands of a global, knowledge based 21<sup>st</sup> century society. Emphasis will be placed on developing the analytic and communication skills necessary to be successful in the workforce. Students will engage with course content organized to analyze the themes of the epic hero, the human condition, an exchange of ideas, and/or emotional currents.

#### Advanced Placement English Language and Composition (HS051)

Grade Level: 11, 12

Credits: 1

Weight: 1.12 (Level IV)

Prerequisites: Literature, Analysis, and Composition II or III – Honors (90% or higher), a Proficient or Advanced score on the Literature Keystone Exam, and teacher recommendation

This rigorous course is designed for the highest achieving English students who desire to complete high school studies equivalent to a one-semester college introductory course in English.

AP English Language and Composition cultivates the reading and writing skills that students need for college success and for intellectually responsible civic engagement. This writing intensive course guides students in becoming curious, critical, and responsive readers of diverse texts, and becoming flexible, reflective writers of texts addressed to diverse audiences for diverse purposes. The reading and writing done by students in this course will deepen and expand their understanding of how written language functions rhetorically. *Fulfillment of a summer reading requirement is necessary prior to commencement of the course.* 

## Advanced Placement English Literature and Composition (HS050)

Grade Level: 12 Length of Course: 180 days
Credits: 1 Weight: 1.12 (Level IV)
Prerequisites: Literature, Analysis, and Composition III – Honors (90% or higher), a Proficient or

Advanced score on the Literature Keystone Exam, and teacher recommendation

This rigorous course is designed for the highest achieving English students who desire to complete high school studies equivalent to a one-semester college introductory course in English.

The AP English Literature and Composition course focuses on reading, analyzing, and writing about imaginative literature (fiction, poetry, drama) from various periods. Students engage in close reading and critical analysis of imaginative literature to deepen their understanding of the ways writers use language to provide both meaning and pleasure. As they read, students consider a work's structure, style, and themes, as well as its use of figurative language, imagery, and symbolism. Writing assignments include expository, analytical, and argumentative essays that require students to analyze and interpret literary works. Students must be able to read and comprehend college-level texts and write grammatically correct, complete sentences. *Fulfillment of a summer reading requirement is necessary prior to commencement of the course.* 

## **AP Capstone - Seminar (HS053)**

Grade Level: 11,12 Length of Course: 180 days Credits: 1 Weight: 1.12 (Level IV)

Prerequisites: Literature, Analysis, and Composition II or III – Honors (90% or higher), a Proficient or

Advanced score on the Literature Keystone Exam, and teacher recommendation

AP Seminar is the foundational course for the AP Capstone program. AP Capstone is an innovative college-level program based on the completion of two courses, AP Seminar and AP Research. The program immerses students in the challenging practice of the critical skills students need today. The ability to think independently, write effectively, research, collaborate, and learn across disciplines is essential for success in college and beyond. The rigorous nature of AP Capstone will challenge students to explore different points of view and make connections across disciplines, leading to a rich appreciation for the complexity of important issues.

AP Seminar engages students in cross-curricular conversations that explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Using an inquiry framework, students practice reading and analyzing articles, research studies, and foundational literary and philosophical texts; listening to and viewing speeches, broadcasts, and personal accounts; and experiencing artistic works and performances. Students learn to synthesize information from multiple sources, develop their own perspectives in research-based written essays, and design and deliver oral and visual presentations, both individually and as part of a team. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision in order to craft and communicate evidence-based arguments. AP Seminar is the prerequisite course for AP Research. *Fulfillment of a summer reading requirement is necessary prior to commencement of the course.* 

In order to earn the AP Capstone Diploma through the College Board, students must earn scores of 3 or higher on both the AP Seminar and AP Research Exams, as well as on four additional AP Exams of their choosing.

Students who earn scores of 3 or higher on AP Seminar and AP Research but not on four additional AP Exams receive the AP Seminar and Research Certificate through the College Board.

### <u>AP Capstone – Research (HS916)</u>

Grade Level: 11, 12 Length of Course: 180 days Credits: 1.00 Weight: 1.12 (Level IV)

Prerequisite: A score of 3 or higher on the AP Seminar Exam

AP Capstone is an innovative college-level program based on the completion of two courses, AP Seminar and AP Research. The program immerses students in the challenging practice of the critical skills students need today. The ability to think independently, write effectively, research, collaborate, and learn across disciplines is essential for success in college and beyond. The rigorous nature of AP Capstone will challenge students to explore different points of view and make connections across disciplines, leading to a rich appreciation for the complexity of important issues.

AP Research, the second course in the AP Capstone experience, allows students to deeply explore an academic topic, problem, issues, or idea of individual interest. Students design, plan, and implement a yearlong investigation to address a research question. Through this inquiry, they further the skills they acquired in the AP Seminar course by learning research methodology, employing ethical research practices, and accessing, analyzing, and synthesizing information. Students reflect on their skill development, document their processes, and curate the artifacts of their scholarly work through a process and reflection portfolio. The course culminates in an academic paper of 4,000 to 5,000 words (accompanied by a performance, exhibit, or product where applicable) and a presentation with an oral defense.

In order to earn the AP Capstone Diploma through the College Board, students must earn scores of 3 or higher on both the AP Seminar and AP Research Exams, as well as on four additional AP Exams of their choosing.

Students who earn scores of 3 or higher on AP Seminar and AP Research but not on four additional AP Exams receive the AP Seminar and Research Certificate through the College Board.

## **Electives** (Do not fulfill graduation requirements for English Language Arts.)

Television and Film Production I (HS078)

Grade Level: 9, 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

This course will introduce students to the television and film production process with an emphasis on studio production. Students will be introduced to the basic concepts of camera and video editing skills. Students will also gain practical experience in camera work, audio development, special effects design, and will learn how to operate all crew positions in a variety of studio lab projects. Students are expected to arrive each school day at 7:20 a.m. to prepare for the morning announcements.

### Television and Film Production II (HS079)

Grade Level: 9, 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

Prerequisite: Television and Film Production I (80% or higher)

This course will include an in-depth study and application of television production techniques. Students will focus on the writing techniques behind the development behind multiple genres of television. Students will study the structural design behind the development of commercials, sitcom comedies, TV dramas, and miniseries. This knowledge will be utilized in the creation of television miniseries that will focus on long-term story arcs as well as episodic arcs. These scripts will then be produced applying visual techniques learned in TV and Film Production I. Students are expected to arrive each school day at 7:20 a.m. to prepare for the morning announcements.

#### **Television and Film Production Management (HS080)**

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.03 (Level II)

Prerequisite: Television and Film Production II (80% or higher) and instructor approval

This course will give students the choice between an in-depth look at the structure of either an independent film or a documentary. This knowledge will be applied in the development of a final project that will focus on act structure, character development, and the development of a universal truth. These scripts will then be produced applying visual techniques learned in TV and Film Production I and II. Students are expected to arrive each school day at 7:20 a.m. to prepare for the morning announcements.

### Yearbook Journalism I (HS070)

Grade Level: 9, 10, 11, 12

Credits: .5

Weight: 1.00 (Level I)

Prerequisite: Concurrent enrollment in Honors or CP Literature, Analysis, and Composition

This course will cover several aspects of producing the high school yearbook and DVD supplement. Students will sell advertisements, take photographs, scan and crop pictures, write body copy, captions, headlines, and create yearbook pages digitally using InDesign, Photoshop, and other programs critical to the creation of the school yearbook. The students will also learn basic video skills and digital video editing. This class involves a great deal of dedication and time outside of class; making deadlines is absolutely necessary. Students in this class must complete an application form, attend orientation meetings, write a 500 word essay, and be approved by the yearbook advisor and current English teacher. Enrollment is limited.

#### Yearbook Journalism II (HS071)

Grade Level: 9, 10, 11, 12

Length of Course: 90 days
Credits: .5

Weight: 1.00 (Level I)

Prerequisite: Yearbook Journalism I (80% or higher) and approval of yearbook advisor

This course will include in-depth practice and application of journalistic methods, interviewing practices, writing, and graphic design. There will be a heavy emphasis on developing the journalistic writing style. Projects will include reading and writing news, feature, sports, and editorial articles. Students will apply advanced photography and graphic design knowledge to create layouts that are visually appealing. Students will make extensive use of their working knowledge of In Design, Photo Shop, Illustrator, and Microsoft Word, and other programs critical to the creation of the school yearbook. This is a co-curricular course, which means that outside-of-class time will be required as a part of the student's grade. Students will be expected to come in after school to complete assignments as necessary. Students must also come in on Saturdays and after school on Fridays as scheduled (approximately one each per month). Students will also attend various extra-curricular events to take photographs and obtain information for stories and captions. Enrollment is limited.

#### Yearbook Journalism Management (HS072)

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.03 (Level II)

Prerequisite: Yearbook Journalism II (80% or higher) and approval of yearbook advisor

This course will continue in-depth practice and application of journalistic methods, interviewing practices, writing, and graphic design. Students will manage the production of the High School's yearbook and the business operations involved with producing the annual publication. Yearbook management students will supervise and assist other students in projects related to production of journalistic articles and layout. This is a co-curricular course, which means that outside-of-class time (including after school and Saturdays) will be required as a part of the student's grade. Students will also attend various extra-curricular events to take photographs and obtain information for stories and captions. Enrollment is limited.

## **FAMILY AND CONSUMER SCIENCES**

Cooking Light and Easy (HS750)

Grade Level: 9, 10, 11, 12

Length of Course: 90 days
Credits: .5

Weight: 1.00 (Level I)

Healthy food selection adapted as a life-long practice for promoting personal wellness is the focus of this course. Proper kitchen safety and sanitation methods will be covered, as well as topics in nutrition, menu planning, foodborne illness, food preparation techniques, and cooking for dietary restrictions. You will explore the six major nutrient groups and the five food groups through food preparation and an exploration of topics. Preparation techniques for cooking light will be practiced in the food lab.

### Culinary Café (HS751)

Grade Level: 9, 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

This course exemplifies the concept of a café. It is unique yet varied, classy yet comfortable, and fun yet serious. Its "menu" contains topic selections ranging from U.S. regional foods and cooking; to choosing, reading, refining, and preparing recipes; to practicing kitchen math and conservation; to planning appealing but functional workspaces and event planning. The course also involves students learning the responsibilities of various food service roles. It is a celebration of all things culinary.

#### **Education Seminar (HS762)**

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.00 (Level I)

Prerequisite: Human Development

This course is for college-bound students who intend to major in any education-related field K thru 12. Students will demonstrate an understanding of the integration of curriculum and instruction to meet a student's developmental needs. Students will experience what it is like to major in the education field by researching college expectations, talking with current college students majoring in education, and exploring colleges that excel in teaching students how to teach. Students will be encouraged to visit teachers currently teaching the grade/subject area that interests them most. Students will have the opportunity for in-depth study and practical application.

### **Global Cuisine (HS754)**

Grade Level: 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

Prerequisite: Cooking Light and Easy strongly recommended

The majority of this course involves exploring the culture and foods of various countries. Students will expand their horizons by studying the geography, history, populations, and food customs of the country as they relate to and influence current cuisine. Students will also consider the psychological, familial, and societal influences on their own personal food choices as well as nutrition across the lifespan.

### **Human Development (HS763)**

Grade Level: 9, 10, 11, 12

Length of Course: 90 days
Credits: .5

Weight: 1.00 (Level I)

This course offers an overview of human development from prenatal through adolescence. Students will study theories of child development, pregnancy, parenting, and childhood milestones. Students will focus on the educational needs of children of all ages and discover how to encourage their physical, intellectual, emotional, and social development and growth. This course is designed for anyone interested in a career in which they will work with children, including education, nursing, and human service professions.

#### Living On Your Own (HS756)

Grade Level: 9, 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

Students will learn the roles and responsibilities needed to function as an independent adult. Good decision-making, goal setting, and communication are key to success, and students will use practical reasoning to acquire these skills. In addition, students will consider possible college and career options. Smart shopping via assessing consumer needs and spending strategies relating to personal finance will be explored. Students will have a hands-on experience with housekeeping, laundering, sewing and kitchen skills.

Preschool: Age 3 (HS760)

Grade Level: 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

Prerequisite: Human Development strongly recommended

Students will explore the unique needs of preschool aged children by planning activities and lesson materials that are age specific. Students will work to create an exceptional and safe learning environment for the young child(ren) for whom you will be instructing these lessons. Preschool age students from the community will be coming into the High School, thus providing students with a real-world experience as an educator. Presentation of lessons to community preschoolers will take place for all students and are a requirement for the course.

## Preschool: Ages 4-5 (HS761)

Grade Level: 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

Prerequisite: Human Development strongly recommended

Students will explore the unique needs of preschool aged children by planning activities and lesson materials that are age specific. Students will work to create an exceptional and safe learning environment for the young child(ren) for whom you will be instructing these lessons. Preschool age students from the community will be coming into the High School, thus providing students with a real-world experience as an educator. Presentation of lessons to community preschoolers will take place for all students and are a requirement for the course.

## Child Development Independent Study (HS765)

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.03 (Level II)

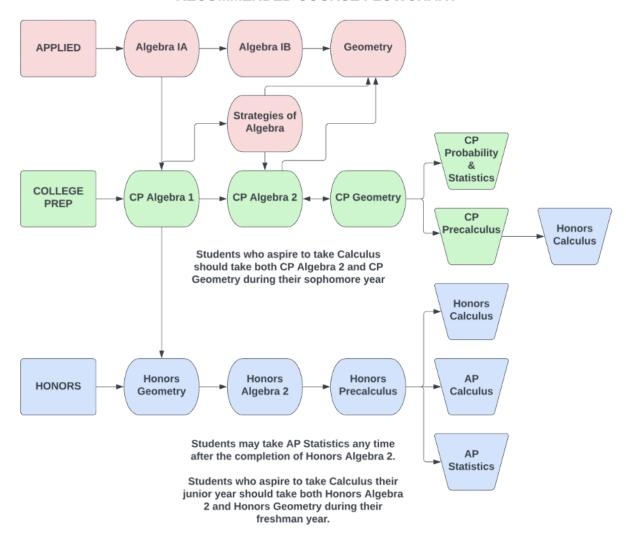
Prerequisites: Preschool (Age 3), Preschool (Ages 4-5), Human Development and teacher

recommendation

This course is offered to students who wish to pursue a career in preschool or early elementary education. Students will tailor their course to their interests and spend time working with preschool and/or elementary age children. Preschool age students from the community will be coming into the High School, thus providing students with a real-world experience as an educator. Presentation of lessons to community preschoolers will take place for all students.

## **MATHEMATICS**

# ELCO HIGH SCHOOL DEPARTMENT OF MATHEMATICS RECOMMENDED COURSE FLOWCHART



#### **Statement for Calculator Use**

Calculators will be utilized in every course when appropriate. The graphing calculator will be introduced, taught, and used at the appropriate time. Scientific calculators will be used extensively, building to the graphing calculator. Student calculator use will be determined by the teacher of each individual course. Every mathematics teacher is able to provide a classroom set of scientific or graphing calculators.

The mathematics courses are designed to follow the Pennsylvania Core Standards. The main purpose of the PA Core Standards is to provide the math skills identified by the Commonwealth of Pennsylvania as being essential for a student to be successful after high school.

#### Algebra IA (HS111)

Grade Level: 9 Length of Course: 180 days Credits: 1 Weight: 1.00 (Level I)

Algebra IA is designed for those students who need a thorough course in Algebra I, but at a slower pace. Topics include: Expressions and Linear Equations, Linear Inequalities, Linear Functions, and Equations of Linear Functions. Students completing this course must take the sequel, Algebra IB. This course is designed to meet the Algebra I PA Core Standards as assessed on the Algebra I Keystone Exam in an effort for all students to achieve proficiency. Students will have the opportunity to learn topics tested on the Algebra I Keystone assessment. Students will be expected to think critically while solving challenging problems and studying mathematical concepts.

#### Algebra IB (HS112)

Grade Level: 10 Length of Course: 180 days
Credits: 1 Weight: 1.00 (Level I)

Prerequisite: Algebra IA or Pre-Algebra (HS110)

This course is the sequel to Algebra IA. Topics include: Systems of Linear Equations and Inequalities, Exponents and Simplifying Polynomials, Factoring Polynomials and Solving Quadratic Equations, Analyzing Data, and other mathematical topics. This course is designed to meet the Algebra I PA Core Standards as assessed on the Algebra I Keystone Exam in an effort for all students to achieve proficiency. Students will have the opportunity to learn topics tested on the Algebra I Keystone assessment. Students will be expected to think critically while solving challenging problems and studying mathematical concepts. Students will take the Algebra I Keystone Exam near the conclusion of this course that will assess students on <u>ALL</u> concepts discussed in Algebra IA AND in Algebra IB.

#### Geometry (HS143)

Grade Level: 11, 12 Length of Course: 180 days Credits: 1 Weight: 1.00 (Level I)

Prerequisite: Algebra IB or Algebra (HS123)

This course is designed to fulfill the Geometry PA Core Standards as determined by the PA Department of Education. This course studies two and three-dimensional geometry while integrating previously learned algebraic topics. Course topics will include lines, angles, triangles, polygons, circles, area of two-dimensional figures, surface area and volume of three-dimensional figures, and right triangle trigonometry.

#### Strategies of Algebra (HS101)

Grade Level: 10, 11

Credits: 1

Weight: 1.00 (Level I)

Prerequisite: CP Algebra I AND scoring Basic or Below Basic on the Algebra I Keystone Exam

This course is designed only for students who did not score Advanced or Proficient on the Algebra I Keystone Exam. Instruction will be geared to meet the individual needs of the student while addressing the Algebra I PA Core Standards as assessed on the Algebra I Keystone Exam in an effort for all students to achieve proficiency.

College Prep Courses are more mastery driven than content driven. This is the significant difference between honors math courses and college prep courses.

\*\*It is recommended for students at the CP level who aspire to take Calculus to complete CP Algebra II and CP Geometry during their sophomore year.\*\*

#### Algebra I – College Prep (HS122)

Grade Level: 9, 10

Credits: 1

Weight: 1.03 (Level II)

Prerequisite: Algebra IA/Pre-Algebra (HS110) (90% or higher); Middle School Intro to Algebra (75% or higher); Middle School Math 8 (80% or higher) OR teacher recommendation

This course is designed for college-bound students in an effort to meet the Algebra I PA Core Standards as assessed on the Algebra I Keystone Exam. Students who successfully complete the course will be prepared to achieve proficiency on the Algebra I Keystone Exam and to continue their study in CP Algebra II. This course provides the foundation for the study of operations and properties of the real number system. Topics include the study of linear equations/functions, linear inequalities, absolute value equations, systems of equations/inequalities, properties of exponents, factoring, and topics from probability and statistics. Students will be expected to think critically while solving challenging problems and studying mathematical concepts.

#### Algebra II – College Prep (HS132)

Grade Level: 9, 10, 11

Credits: 1

Length of Course: 180 days

Weight: 1.03 (Level II)

Prerequisite: CP Algebra I (75% or higher) or Algebra IB/Algebra I (HS123) (90% or higher) OR scoring Advanced or Proficient on the Algebra I Keystone Exam OR Honors Algebra I in 8<sup>th</sup> grade and Basic or Below Basic on the Algebra I Keystone Exam OR teacher recommendation

This is a course for college-bound students designed to meet the Algebra II PA Core Standards and prepare students for CP Precalculus. This course reviews Algebra I concepts with more emphasis on fractional expressions and word problems. Students will learn to solve polynomial equations, simplify radicals, solve radical equations, graph quadratics, work with irrational expressions, and will include a study of functions and a look at the complex numbers.

## Geometry - College Prep (HS142)

Grade Level: 11, 12

Credits: 1

Weight: 1.03 (Level II)

Prerequisite: CP Algebra II (75% or higher) or Strategies of Algebra (80% or higher) or teacher

recommendation

This course is designed to meet the Geometry PA Core Standards. This algebra-based course includes the study of two and three-dimensional geometry. Topics include properties of lines, angles, triangles, polygons, circles, area of two-dimensional figures, and the area and volume of three-dimensional figures. The course includes a study of proof writing and other mathematical arguments.

### Precalculus - College Prep (HS152)

Grade Level: 11, 12

Credits: 1

Weight: 1.03 (Level II)

Prerequisite: CP Algebra II (75% or higher) AND CP Geometry or teacher recommendation

This is an alternate course for students in the honors math track or for CP Algebra II students who wish to pursue a math or science major in college, but need a thorough explanation and additional practice with precalculus topics. The topics include various forms of algebraic functions and trigonometry.

#### Probability & Statistics - College Prep (HS172)

Grade Level: 11, 12 Length of Course: 180 days Credits: 1 Weight: 1.03 (Level II)

Prerequisite: Successful completion of CP Algebra II and CP Geometry

This course is designed to give college bound students a firm background in probability and statistics. The topics include the various types of graphs of data, measures of central tendency, linear regressions, correlation, probability theory, binomial probability, and normal distributions. There is a large emphasis on technology, primarily the TI-84 Plus Silver Edition graphing calculator, which is provided for each student.

Honors Courses are AP Calculus-driven. This means that students electing this level will be prepared for the AP Calculus AB test. These courses are designed down from the AP test. Learning the entire curriculum is rigorously emphasized.

#### Geometry – Honors (HS141)

Grade Level: 9, 10

Credits: 1

Weight: 1.06 (Level III)

Prerequisite: Scoring Advanced or Proficient on the Algebra I Keystone Exam, Honors Algebra I (80% or

higher), CP Algebra I (90% or higher & teacher recommendation) or teacher recommendation

This is a course for college-bound students to meet the Geometry PA Core Standards. This course is designed down from the AP Calculus exam and learning the content of the entire curriculum is rigorously emphasized. This course studies both plane and solid geometric figures along with their constructions and relationships to algebra. The course includes a formal study of proof writing and other mathematical arguments. A strong background in algebra is required.

#### Algebra II – Honors (HS131)

Grade Level: 10 Length of Course: 180 days
Credits: 1 Weight: 1.06 (Level III)

Prerequisite: Honors Geometry (80% or higher) or teacher recommendation

This is a course for college-bound students to meet the Algebra II PA Core Standards and prepare students for Honors Precalculus. This course is designed down from the AP Calculus exam and learning the content of the entire curriculum is rigorously emphasized. This course begins with a rapidly paced review of Algebra I concepts and then involves solving polynomial equations, simplifying radicals, solving radical equations, graphing quadratics, a thorough study of functions, working with irrational expressions, and a look at the complex numbers.

#### <u>Precalculus – Honors (HS151)</u>

Grade Level: 11 Length of Course: 180 days Credits: 1 Weight: 1.06 (Level III)

Prerequisite: Honors Algebra II (80% or higher) and CP or Honors Geometry or teacher recommendation

This course is geared to prepare students for a college-level calculus course. The course begins with an in-depth look at algebraic and transcendental functions. It then deals with various concepts involved in any study of trigonometry, including the three types of trigonometry. This course is designed down from the AP Calculus exam and learning the content of the entire curriculum is rigorously emphasized.

### Calculus - Honors (HS161)

Grade Level: 12 Length of Course: 180 days
Credits: 1 Weight: 1.06 (Level III)
Prerequisite: Precalculus - Honors (75% or higher) or Precalculus - CP (80% or higher) or teacher

recommendation

This course is applicable for students who plan to take calculus in college. It is designed as an introductory calculus course dealing with the study of limits, differentiation of elementary functions and an introduction of the Fundamental Theorem of Calculus.

#### AP Calculus (HS160)

Grade Level: 12 Length of Course: 180 days Credits: 1 Weight: 1.12 (Level IV)

Prerequisite: Precalculus - Honors (80% or higher) or teacher recommendation

This is the Advanced Placement Calculus AB course, and it is geared toward students who plan to major in math or science in college. There will be many application problems from physics, and it is recommended that students also take Honors Physics. The curriculum consists of the study of limits and differentiation and integration of elementary functions. Upon completion of the course, the students will be prepared to take the AP Calculus AB exam offered through the College Board.

#### AP Statistics (HS170)

Grade Level: 11, 12 Length of Course: 180 days Credits: 1 Weight: 1.12 (Level IV)

Prerequisite: Algebra II – Honors (80% or higher) or teacher recommendation; Students who desire to take this course as a 10<sup>th</sup>-grade student MUST receive a teacher recommendation from their 9<sup>th</sup>-grade Math instructor.

The purpose of the AP course in statistics is to introduce students to the major concepts and tools for collecting, analyzing and drawing conclusions from data. Students are exposed to four broad conceptual themes:

- Exploring Data: Describing patterns and departures from patterns.
- Sampling and Experimentation: Planning and conducting a study.
- Anticipating Patterns: Exploring random phenomena using probability and simulation.
- Statistical Inference: Estimating population parameters and testing hypotheses.

Curriculum for this course follows the AP Statistics curriculum set by the College Board and is designed to prepare students for the AP Statistics exam.

## **MUSIC**

Band (HS650 OR HS651)

Grade Level: 9, 10, 11, 12

Length of Course: 180 days
Credits: .25 (with Chorus) or .5

Weight: 1.00 (Level I)

Open to all students who wish to participate in a challenging instrumental music setting. The band performs at numerous school and community events throughout the school year. All members are required to perform at football games, parades and concerts. Extensions of band include the jazz band, pit orchestra, and drumline. Students must be enrolled in band in order to be eligible for any of the other ensembles. This course will be offered during flex and does not conflict with students' course choices.

### **Chorus (HS660 OR HS661)**

Grade Level: 9, 10, 11, 12

Credits: .25 (with Band) or .5

Length of Course: 180 days

Weight: 1.00 (Level I)

Membership is open to anyone interested in singing. Voice parts available are soprano, alto, tenor and bass. Advanced pianists are encouraged to accompany this ensemble. Extensions of the chorus include Concert Choir, Show Choir, and Barbershop Choir. Students must be enrolled in chorus in order to be eligible for any of the other vocal ensembles. This course will be offered during flex and does not conflict with students' course choices.

#### **Advanced Music Stage Production (HS675)**

Grade Level: 10, 11, 12

Length of Course: 90 days
Credits: .5

Weight: 1.00 (Level I)

Prerequisite: Music Stage Production (80% or higher)

This course is designed to further students' knowledge and skills in understanding, utilizing, and developing scenic designs, stage lighting, performance set-up and rigging, and sound production and set-up. Students will be instructed in lighting concepts for professional theater. Students in this class will help to supervise the construction of the fall and spring theatrical productions.

#### American Musical Theater (HS670)

Grade Level: 9, 10, 11, 12

Length of Course: 90 days
Credits: .5

Weight: 1.00 (Level I)

This course is an overview of the American Musical Theater from the early 1900's to the present. Students will be studying, researching, viewing and discussing numerous American Musicals. The class will also be exposed to staging, schools of directing styles, impromptu acting and writing. The final project will be writing, producing and performing a short one-act musical as a class.

## **AP Music Theory (HS676)**

Grade Level: 10, 11, 12

Length of Course: 180 days

Credits: 1

Weight: 1.12 (Level IV)

Prerequisite: Successful completion of Music Theory.

This course develops a student's ability to recognize, understand, and describe the basic materials and processes of music that are heard or presented in a score. The course strives to develop a student's aural, sight-singing, written, compositional, and analytical skills through listening, performance, written, creative, and analytical exercises. This course will prepare students to take the AP Music Theory Exam, which tests students' understanding of musical structure and compositional procedures through recorded and notated examples.

## Concert Choir (HS662)

Grade Level: 9, 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.03 (Level II)

Prerequisite: Audition

This choral class consists of performing more difficult choral literature and concentrates on improving individual musicianship for each member. Students will learn sight-singing, music theory, and work on solo pieces. Students will sing in smaller group settings as well. This class is available to students in grades 9-12 who are scheduled for chorus all year. Students who take this class must be scheduled for Chorus all year.

#### History of Pop Music (HS678)

Grade Level: 9, 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

The aim of this course is to explore a number of different approaches to the relationship between music and its cultural and social contexts in modern times. Students will "sample" a broad spectrum of issues, methods, and musical forms including: Jazz & Swing Styles, Pop & Rock Styles, Dance & Electronica Styles, Entertainment & Musical Humor, Musical Theatre, Film Scoring, Commercial Music, and Contemporary Music.

#### **Music Stage Production (HS674)**

Grade Level: 9, 10, 11, 12

Length of Course: 90 days
Credits: .5

Weight: 1.00 (Level I)

This course is designed to provide students with the basic skills in understanding, utilizing, and developing stage work, performance set-up and rigging, as well as live sound production and set-up. Students will be instructed in stage and production safety procedures, the technological aspects of sound equipment, and stage performance design and set-up, as well as preparation for concerts and performances.

# **Music Theory (HS677)**

Grade Level: 9, 10, 11, 12 Length of Course: 90 days

Weight: 1.00 (Level I) Credits: .5

This course will guide students in developing their own written musical work. Students will study the techniques of music theory, through writing, analyzing and notating music. This course includes: the study of the building blocks of notated music, listening analysis of music material; careers and backgrounds of composers, writers, and performers; discussion of styles, techniques, and arrangements; music problem solving; the use of music writing and performance software. If you are looking for a course which utilizes Garageband and other forms of creating music digitally, choose music recording and production. This class serves as the pre-requisite for AP Music Theory.

# Piano (HS653)

Grade Level: 9, 10, 11, 12 Length of Course: 90 days Weight: 1.00 (Level I) Credits: .5

Prerequisite: None

This course is designed for students who wish to develop basic piano playing skills, or expand on their existing skills. Time in class will be spent both on and off the keyboards. While playing, students will be working individually and in small groups to master the techniques of playing and to learn pieces. There will also be time spent in group instruction on musical notation and theory.

### Rock Band (HS654)

Grade Level: 9, 10, 11, 12 Length of Course: 90 days

Credits: .5 Weight: 1.00 (Level I)

Prerequisite: None

Rock band is a one-semester course designed for students who want to develop music-making skills and music literacy using primarily rock and pop music. It is an introductory level course, so no previous experience is needed.

Some key takeaways from the class are that students:

- Learn new musical instruments such as guitar, electric bass, drums, and keyboards
- Explore an interest in singing with a group
- Deepen understandings of the fundamental elements of music
- Study the history and evolution of rock music
- Explore live sound reinforcement techniques
- Use popular and rock music as the springboard to group music making.

# Sound Recording and Production (HS679)

Grade Level: 9, 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

This course is devoted to the intricacies of sound and music recording and production. Students will focus on proper recording equipment and techniques for producing professional quality music albums. Areas of study will include microphones, mixers, recording software, sound engineering, and sequencers. This course will also explore specific effects and plug-ins within Garageband.

# Voice Class (HS663)

Grade Level: 9, 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

Prerequisite: None

Voice Class is an introductory course designed to teach students how to make their voice sound more powerful, how to use vocal technique to expand their range and expression, and how to become more confident in vocal performances. This course is a fantastic starting point for anyone wanting to make the most of their voice.

# **SCIENCE**

Grade 9	Grade 10	Grade 11	Grade 12
Biology - Honors	Chemistry I - Honors	AP Biology; AP Environr Physics I: Algebra-Based Physiology; Chemistry I Instrumental Analysis (. Honors; Physics II - Hon	d; Anatomy and I – Honors; 5 credit); Physics I –
Biology - CP	Chemistry I – CP (if completed Algebra I in 9 <sup>th</sup> -grade)  Environmental Ecology (if completed Algebra IA or Pre-Algebra in 9 <sup>th</sup> -grade)	Chemistry in Agriculture Cooking; Environmenta Science; Physics I - CP; I	l Ecology; Forensic
Principles of Scientific Inquiry	Biology – Applied	Physical Science – Applied	Science Choice

# Biology – Honors (HS211)

Grade Level: 9 Length of Course: 180 days Credits: 1 Weight: 1.06 (Level III)

Prerequisite: Honors Algebra I (Grade 8) with math teacher recommendation, Proficient or Advanced score on the 8<sup>th</sup>-grade PSSA Science, and teacher recommendation

Honors Biology is designed for the college-bound student who anticipates a future in the sciences. It acquaints students with biological principles through the discovery method. Extensive lab work and a dissection are included. Topics will include the scientific method, measurement, characteristics of life, basic biochemistry, basic ecology, the cell, cellular energy, nucleic acids and protein synthesis, genetics, and change through time. Students will take the Biology Keystone exam upon completion of this course.

# **Biology - College Prep (HS212)**

Grade Level: 9

Credits: 1

Weight: 1.03 (Level II)

Prerequisite: Pre-Algebra (Grade 8), teacher recommendation, and 8<sup>th</sup>-grade PSSA Science score

College Prep Biology is designed for the college-bound student. It acquaints students with biological principles through the discovery method. Extensive lab work is involved and a dissection is included. Topics will include the scientific method, measurement, characteristics of life, basic chemistry, basic ecology, the cell, nucleic acids and protein synthesis, genetics, and change through time. Students will take the Biology Keystone exam upon completion of this course.

# Biology - Applied (HS213)

Grade Level: 10 Length of Course: 180 days Credits: 1 Weight: 1.00 (Level I)

This course is designed to meet the needs of students preparing for a technical/trade school or the working world. It will introduce the student to the world of living organisms and provide information useful in daily life. Topics will include the scientific method, measurement, characteristics of life, basic chemistry, basic ecology, the cell, nucleic acids and protein synthesis, genetics, and change through time. Students will take the Biology Keystone exam upon completion of this course.

# **Principles of Scientific Inquiry (HS214)**

Grade Level: 9 Length of Course: 180 days Credits: 1 Weight: 1.00 (Level I)

Prerequisite: Teacher recommendation and 8<sup>th</sup>-grade Science PSSA score

Utilizing the principles of basic scientific inquiry as an overarching theme, students will develop the scientific reasoning skills necessary to provide the foundation for success in high school science courses. The class will utilize hands-on activities in the life sciences and the physical sciences. The skills developed through this course will strengthen students' reasoning, analytical, and problem-solving abilities.

# Chemistry I - Honors (HS221)

Grade Level: 10

Credits: 1

Weight: 1.06 (Level III)

Prerequisite: Honors Algebra I (80% or higher) OR CP Algebra I (90% or higher) OR Honors Algebra II (75% or higher)

Honors Chemistry I is designed for the college-bound student with a strong background in mathematics. This course consists of the following topics: matter, measurements, atoms, electrons, periodic table, chemical bonding, chemical formulas, chemical reactions and stoichiometry. Each topic covered will include extensive mathematical calculations. Laboratory exercises and activities will reinforce classroom learning. Students will be required to write lab reports. Calculators are required (Recommended calculator: TI-30X IIS). *This course is currently designated as a "College in* 

the High School" course through Harrisburg University.

Chemistry I - College Prep (HS222)

Grade Level: 10 Length of Course: 180 days Credits: 1 Weight: 1.03 (Level II)

Prerequisite: CP Algebra I (70% or higher) OR Algebra I (80% or higher)

College Prep Chemistry I is designed for the college-bound student. This course consists of the following topics: matter, measurements, atoms, electrons, periodic table, chemical bonding, chemical formulas, chemical reactions and stoichiometry. Required math skills will be taught as needed. Laboratory exercises and activities will reinforce classroom learning. Calculators are required. (Recommended calculator: TI-30X IIS).

AP Biology (HS250)

Grade Level: 11, 12 Length of Course: 180 days Credits: 1 Weight: 1.12 (Level IV)

Prerequisite: Honors Biology (80% or higher)

Honors Chemistry I (80% or higher) and/or teacher recommendation

AP Biology is designed to be the equivalent of a college introductory biology course usually taken by Biology or related science majors, during their first year in college. The topics covered include molecules and cells, genetics and evolution, and organisms and populations with extensive laboratory activities. AP Biology strives to provide the student with the conceptual framework, factual knowledge, and analytical skills to deal critically with the rapidly changing science of biology. *This course alternates with AP Environmental Science and will NOT be offered during the 2024-2025 school year.* 

# AP Environmental Science (HS251)

Grade Level: 11, 12 Length of Course: 180 days Credits: 1 Weight: 1.12 (Level IV)

Prerequisite: Honors Biology (70% or higher) or CP Biology (80% or higher) Chemistry I (80% or higher) and/or teacher recommendation

AP Environmental Science is designed to be the equivalent of a one semester, introductory college course in Environmental Science. It is intended to enable students to undertake, as first year college students, a more advanced study of topics in environmental science or to fulfill a basic requirement for a laboratory science and thus free time for taking other courses. The goal of the course is to provide students with the scientific principles, concepts and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and manmade, to evaluate the risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them. *This course alternates with AP Biology WILL be offered during the 2024-2025 school year.* 

# AP Physics I: Algebra-Based (HS260)

Grade Level: 11, 12

Credits: 1

Weight: 1.12 (Level IV)

Prerequisite: Algebra II – Honors (80% or higher); Geometry – Honors (80% or higher); Physics I:

Mechanics- Honors (80% or higher);; and/or teacher recommendation

AP Physics I: Algebra-Based is designed to be the equivalent of a one semester, introductory college-level course in Physics. Through the course, which focused on inquiry-based investigations, students will explore principles of Newtonian mechanics; work, energy, and power; mechanical waves and sound; and introductory, simple circuits. The course is based on six big ideas, which encompass core scientific principles, theories, and processes that cut across traditional boundaries and provide a broad way of thinking about the physical world. Students will use representations and models to communicate scientific phenomena and solve scientific problems, use mathematics appropriately, and engage in scientific questioning to extend thinking or to guide investigations within the context of the course.

# Anatomy and Physiology – Honors (HS241)

Grade Level: 11, 12 Length of Course: 180 days Credits: 1 Weight: 1.06 (Level III)

Prerequisite: CP Algebra I (80% or higher) and CP Chemistry I (80% or higher)

Honors Biology (80% or higher) OR CP Biology (90% or higher)

and/or teacher recommendation

HAP is designed for students intending to pursue a medical, science, or health-related career in college. It will introduce the student to college-level anatomy and physiology. Extensive medical terminology is also included. Laboratory work is included and a dissection of the fetal pig is the culminating activity. Topics include an introduction to anatomy and physiology, chemical organization, cellular organization, tissues, the skeleton, muscles, and an overview of the brain.

### Chemistry II – Honors (HS231)

Grade Level: 11, 12 Length of Course: 180 days Credits: 1 Weight: 1.06 (Level III)

Prerequisite: Honors Chemistry I (80% or higher)

Honors Algebra II (80% or higher)

Honors Chemistry II is specifically designed to prepare students for college-level chemistry courses and is recommended for students planning to pursue a career in science. The class focus is on continuing to teach advanced inorganic chemistry topics but will also introduce basic organic chemistry concepts to complete the course. Inorganic topics will include a review of Chemistry I, gas laws, solutions, reaction rates and equilibrium, acids/bases and oxidation-reduction. Organic chemistry topics will give students a basic knowledge of the nomenclature of organic compounds, a foundation to draw structural formulas and an understanding of the properties of various classes of organic compounds. Students will use a variety of laboratory instruments and glassware that build upon their Chemistry I foundation and lab work will supplement all classroom topics. Calculators are required. (Recommended calculator: TI-30X IIS).

# **Chemistry in Agriculture (HS246)**

Grade Level: 11, 12 Length of Course: 180 days Credits: 1 Weight: 1.03 (Level II)

Prerequisite: Honors Chemistry I (75% or higher)

College Prep Chemistry (85% or higher)

The ELCO community has strong agricultural ties with many of our students working, living, and/or having an interest in farming/agriculture. Students need the opportunity to apply what they've learned in chemistry and biology to agriculture. Chemistry is found in topics such as aquaponics, hydroponics, aeroponics, plant structure, water, lighting, soil improvements, and alternative fuels. Principles used in chemistry will be directly applied to the previously named topics through direct instruction, indirect instruction, and hands-on STEM based learning. Students will work collaboratively to design, problem solve, build, and monitor a variety of year-long agricultural initiatives/projects that can be implemented at home. Taking chemistry home, understanding how to live a more sustainable life and playing a role in reducing waste are key outcomes of the course.

# **Chemistry of Cooking (HS247)**

Grade Level: 11, 12 Length of Course: 180 days Credits: 1 Weight: 1.03 (Level II)

Prerequisite: Honors Chemistry I (75% or higher)

College Prep Chemistry (85% or higher)

This course will use chemistry skills to investigate food molecules as well as different cooking/baking skills. Students will use a hands-on approach to understand the world of food through different chemical changes and processes. Students will use their basic understanding of chemistry and expand their knowledge to learn about real-time and real-life chemical reactions of food and applications.

# **Environmental Ecology (HS242)**

Grade Level: 10, 11, 12

Credits: 1

Length of Course: 180 days

Weight: 1.03 (Level II)

This course is designed to provide an overview of ecological studies for students with an interest in the environment or who are planning a career in an environmentally related field. Topics covered will include basic ecology, forestry, wildlife, invasive and endangered species, soils, aquatic environments, water quality, pesticides, animal behavior, and migration. Simulation activities and project-based assessments are an integral part of this course.

Forensic Science (HS245)

Grade Level: 11, 12 Length of Course: 180 days Credits: 1 Weight: 1.03 (Level II)

Prerequisite: Successful completion of Biology and Chemistry I.

This course introduces students to the field of forensic science and is designed for students to explore real world applications of chemistry, biology, and associated math skills. The general public's interest in forensic science has increased because of TV shows, such as CSI: Crime Scene Investigation. These shows have made the area of forensic science popular, but they have also misled the public to believe unrealistic expectations of forensic evidence and analysis. This course will correct misconceptions brought on by the "CSI effect" and will explore research techniques implemented on a crime scene and in a forensics lab. The course will focus on all areas associated with crime scene investigation and will discuss how evidence is analyzed. Topics will include analyzing evidence such as blood spatter, glass, soil, drugs, DNA, hairs, fibers, paint, explosives, and fingerprints.

# **Instrumental Analysis** (HS248)

Grade Level: 11, 12 Length of Course: 90 days

Credits: 0.5 Weight: Weight: 1.06 (Level III)

Prerequisite: Honors Chemistry I (75% or higher)

College Prep Chemistry (85% or higher) Geometry (75% or higher) or Concurrent

This course will provide deeper learning and understanding in a science lab setting. Students will learn scientific tools and techniques used in labs, as well as using higher level science equipment (both traditional and technological). Additionally, students will gain a better understanding of using and reading measurements to the correct number of significant figures. Also, students will learn to utilize graphing calculators and different technological software to calculate and extrapolate data from their experiments. Lastly, students will learn how to communicate their scientific findings by writing college level lab reports, reviewing scientific journal articles, learning how to cite scientific references in APA, and simulating how to submit a scientific research paper for publication.

### Physics I – Honors (HS261)

Grade Level: 11, 12 Length of Course: 180 days Credits: 1 Weight: 1.06 (Level III)

Prerequisite: Honors Algebra II and Geometry (may be concurrent)

This course is designed for the college-bound student and emphasizes concepts related to mechanics, including multiple dimensional motion, Newton's Laws, Kepler's Laws, projectile motion and energy momentum. This course will introduce students to everyday physics concepts. The students will learn applications of physics principles involved in sports, race cars, auto accidents, war, animals, lifting weights, as well as many other areas of life around us.

# Physics I – College Prep (HS262)

Grade Level: 11, 12 Length of Course: 180 days Credits: 1 Weight: 1.03 (Level II)

Prerequisite: CP Algebra II and CP Geometry (may be concurrent)

This course is designed for the student who plans to further his/her education but who does not plan to major in mathematics, engineering, or physical sciences. This course will emphasize motion, Newton's Laws, Laws of Gravitation, and momentum. This course will introduce students to everyday physics concepts. The students will learn about the physics involved in sports, race cars, auto accidents, war, animals, lifting weights, as well as many other areas of life around us.

# Physics II – Honors (HS267)

Grade Level: 12 Length of Course: 180 days Credits: 1 Weight: 1.06 (Level III)

Prerequisite: Physics I - Honors

This course is designed for the college-bound student. The course will cover optics, waves, electricity, and magnetism.

### Physics II – College Prep (HS268)

Grade Level: 12 Length of Course: 180 days Credits: 1 Weight: 1.03 (Level II)

Prerequisite: Physics I – CP

This course is designed for the college-bound student who plans to further his/her education but who does not plan to major in mathematics, engineering, or physical sciences. The course will cover optics, waves, electricity, and magnetism.

# **Physical Science - Applied (HS244)**

Grade Level: 11, 12 Length of Course: 180 days Credits: 1 Weight: 1.00 (Level I)

Utilizing the principles of physical sciences as an overarching theme, students will develop the reasoning, mathematical, and problem solving skills necessary to provide a broad-based knowledge of basic chemistry and physics. The class will utilize hands-on activities to strengthen students' analytical abilities.

# **SOCIAL STUDIES**

Grade 9	<u>Grade 10</u>	<u>Grade 11</u>	Grade 12
AP United States	AP United States	AP World History:	AP Macroeconomics
History	Government	Modern	
U.S. History III -	Modern American	Global Studies and	Any AP Social Studies
Honors	Studies and	Geography - Honors	course or Social
	Government -		Studies course(s) of
	Honors		choice
U.S. History III - CP	Modern American	Global Studies and	Any Social Studies
	Studies and	Geography - CP	course(s) of choice
	Government - CP		
U.S. History III -	Modern American	Global Studies and	Any Social Studies
Applied	Studies and	Geography - Applied	course(s) of choice
	Government -		
	Applied		

<u>U.S. History III</u> is a survey course of the period from the turn of the 20th century to modern times. Emphasis is placed upon the expansion of the nation's boundaries, cultural conflict and struggle, industrialization, development of technology, immigrant contributions, reforming American society, participation in global conflicts, and America's rise as a global power. Success in this course is not purely based on memorization; rather, students will need to develop an appreciation for our history and utilize the material studied to develop a personal perspective on history.

# U.S. History III - Honors (HS311)

Grade Level: 9 Length of Course: 180 days
Credits: 1 Weight: 1.06 (Level III)

Prerequisite: 8<sup>th</sup>-grade U.S. History II course (80% or higher)

Students will be expected to complete essay tests, read supplemental materials, and complete extensive writing assignments and research projects, as well as the aforementioned requirements. The course is reserved for high achieving and gifted students who plan to follow an honors track of course offerings within the Social Studies department. Self-motivation and a strong work ethic are needed to be successful in this course.

# U.S. History III - College Prep (HS312)

Grade Level: 9 Length of Course: 180 days
Credits: 1 Weight: 1.03 (Level II)

This course is open to college preparatory students. Students will be expected to complete well-developed formal essay responses and written reports. They will also be expected to utilize supplemental readings and cross-curricular knowledge. Historical analysis responses will be required throughout the course in addition to the aforementioned requirements.

# U.S. History III - Applied (HS313)

Grade Level: 9 Length of Course: 180 days Credits: 1 Weight: 1.00 (Level I)

Students are expected to consistently complete class work, homework, activities, supplemental readings, well-developed written responses, and projects.

<u>Modern American Studies and Government</u> is a survey of the key concepts, governmental institutions and current issues in American politics. Topics covered in the class include the foundations of the United States government, branches of government, the operation of political parties and interest groups, domestic and foreign policy, electoral politics and state and local government. We will also cover American history between 1970-present.

### Modern American Studies and Government – Honors (HS327)

Grade Level: 10 Length of Course: 180 days
Credits: 1 Weight: 1.06 (Level III)

Prerequisite: U.S. History III (80% or higher) or teacher recommendation

Students will be expected to complete essay tests, read supplemental materials, and complete extensive writing assignments and research projects, as well as the aforementioned requirements. The course is reserved for high achieving and gifted students who plan to follow an honors track of course offerings within the Social Studies department. Self-motivation and a strong work ethic are needed to be successful in this course.

# Modern American Studies and Government - College Prep (HS328)

Grade Level: 10 Length of Course: 180 days Credits: 1 Weight: 1.03 (Level II)

This course is open to college preparatory students. Students will be expected to complete well-developed formal essay responses and written reports. They will also be expected to utilize supplemental readings and cross-curricular knowledge. Historical analysis responses will be required throughout the course in addition to the aforementioned requirements.

### Modern American Studies and Government - Applied (HS329)

Grade Level: 10 Length of Course: 180 days Credits: 1 Weight: 1.00 (Level I)

Students are expected to consistently complete class work, homework, activities, supplemental readings, well-developed written responses, and projects.

<u>Global Studies and Geography</u> is a course that studies the importance of place and the development of history and culture in world regions. Specifically, students will be introduced to concepts of geography in the physical and human world and the implications of major historical and cultural influences encompassing religion, politics and economics. The major regions of the world in the western hemisphere including North America, South America, Canada, Europe and Russia and in the eastern hemisphere, the Middle East, Asia and Africa are of focus. The course is designed as a study of geographical regions with an emphasis on historical and cultural developments as well as the global implications in our world today.

### Global Studies and Geography - Honors (HS334)

Grade Level: 11 Length of Course: 180 days Credits: 1 Weight: 1.06 (Level III)

Prerequisite: U.S. Government (80% or higher) or teacher recommendation

Students will be expected to complete essay tests and complete research projects. Supplemental readings are required during the course. The course is reserved for high achieving and gifted students who plan to follow an honors track of course offerings within the Social Studies department. Self-motivation and a strong work ethic are needed to be successful in this course.

# Global Studies and Geography - College Prep (HS335)

Grade Level: 11 Length of Course: 180 days Credits: 1 Weight: 1.03 (Level II)

Students will be expected to complete essay tests and a research project. This course is designed for college-bound juniors.

# Global Studies and Geography – Applied (HS336)

Grade Level: 11 Length of Course: 180 days Credits: 1 Weight: 1.00 (Level I)

Students will be expected to complete essay tests and a research project. Technology research projects are included in the students' evaluation. This course is geared to the level of those students planning to enter a trade or technical school after graduation.

# AP United States History (HS351)

Grade Level: 9, 10, 11, 12

Length of Course: 180 days

Credits: 1

Weight: 1.12 (Level IV)

Prerequisite: Honors U.S. History II (80% or higher) and teacher recommendation

This course is designed for students who want an Advanced Placement course of study in United States History. Ninth-graders may take this course as part of an Advanced Placement sequence of courses that includes AP U.S. Government and AP World History: Modern in addition to AP Macroeconomics. This course is based on the guidelines of the College Board and their syllabus for the Advanced Placement United States History course. Students are encouraged to take the AP exam at the end of the year. Students are expected to do pre-course work. Extensive writing and critical reading are crucial for this course.

\*\* This course fulfills the 9th-grade U.S. History III requirement for graduation.

# AP United States Government (HS350)

Grade Level: 10, 11, 12

Credits: 1

Length of Course: 180 days

Weight: 1.12 (Level IV)

Prerequisite: AP United States History (75% or higher) OR Honors U.S. History III (80% or higher) and teacher recommendation

This course is designed for those students who want an Advanced Placement course of study in United States Government. Tenth-grade students are encouraged to take this course as part of an Advanced Placement sequence of courses that includes AP United States History and AP World History: Modern in addition to AP Macroeconomics. This course is based on the guidelines of the College Board and their syllabus for the Advanced Placement United States Government course. Students are encouraged to take the AP exam at the end of the year. Students are expected to do pre-course work. Extensive writing and critical reading are crucial for this course.

\*\* This course fulfills the 10<sup>th</sup>-grade Modern American Studies and Government requirement for graduation.

### **AP World History: Modern (HS352)**

Grade Level: 11, 12 Length of Course: 180 days Credits: 1 Weight: 1.12 (Level IV)

Prerequisite: AP United States History (75% or higher) and AP United States Government (75% or higher) OR Honors U.S. History III (80% or higher) and Honors Modern American Studies and Government (80% or higher) and teacher recommendation

This course is designed for those students who want an Advanced Placement course of study in World History. Eleventh-grade students are encouraged to take this course as part of an Advanced Placement sequence of courses that includes AP United States History and AP United States Government in addition to AP Macroeconomics. This course is based on the guidelines of the College Board and the syllabus for Advanced Placement World History course. Students are encouraged to take the AP exam at the end of the year. Students are expected to do pre-course work. Extensive writing and critical reading are crucial for this course.

\*\* This course fulfills the 11<sup>th</sup>-grade Global Studies and Geography requirement for graduation.



# AP Macroeconomics (HS354)

Grade Level: 11, 12

Credits: 1

Length of Course: 180 days

Weight: 1.12 (Level IV)

Prerequisite: AP United States History (75% or higher) and AP United States Government (75% or higher) and AP World History: Modern (75% or higher) OR Honors U.S. History III (80% or higher) and Honors Modern American Studies and Government (80% or higher) and Honors Global Studies and Geography (80% or higher) and teacher recommendation

This course is designed for those students who want an Advanced Placement course of study in Economics. This course is based on the guidelines of the College Board and the syllabus for Advanced Placement Macroeconomics course. Students are encouraged to take the AP exam at the end of the year. Students are expected to do pre-course work. Extensive writing and critical reading are crucial for this course.

\*\* This course is a course of choice and does NOT fulfill a core credit in Social Studies for graduation.

# **Social Studies Electives** (Do not fulfill graduation requirements for Social Studies.)

# American History through Film (HS370)

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.03 (Level II)

This elective course examines Hollywood feature films and historical dramas as historical evidence. Students view movies on various topics and participate in discussions, and write essays comparing that film evidence to information in more traditional sources, such as articles, film reviews and critical commentaries. The course is based around six broad questions: Is film a legitimate historical source? To what extent is film evidence legitimate? What determines the legitimacy of film evidence? What determines the illegitimacy of film evidence? Is film evidence ever better than traditional historical sources? Can Hollywood films be used to teach history?

This course is a course of choice and does not fulfill a core credit in Social Studies for graduation.

### **Economics (HS371)**

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.03 (Level II)

Economics is a social science concerned with the choices individuals make in life to satisfy their wants and needs. The elective course in Economics introduces students to a new way of thinking about the world. The primary units of study will include: (1) Fundamentals of Economic Decision-Making, (2) Economic Theory, (3) Money and Debt Management, (4) Business and Labor, (5) Macroeconomic Policies and Globalization, (6) Becoming Financially Secure. As a college prep level course, assignments are intended to prepare students for the level of expectations they may face in higher education. This course will include a balance of both theoretical and practical elements and will examine many economic principles that will assist students in developing the knowledge and skills required to make sound economic and financial decisions.

This course is a course of choice and does not fulfill a core credit in Social Studies for graduation.

### **Holocaust and Genocide Studies (HS372)**

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.03 (Level II)

This elective course will examine the meaning of genocide and the history behind the concept. Students will learn of the various examples of genocide in the 20th Century and will examine and analyze the impact of genocide on people, politics, economics, society, history, and culture. The course will focus on the Holocaust in Europe in order to develop key concepts and knowledge before moving into other examples of genocide around the world. Students will gain an understanding of the importance of Holocaust and genocide studies/education.

This course is a course of choice and does not fulfill a core credit in Social Studies for graduation.

# Psychology (HS361)

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.03 (Level II)

This course focuses on the study of leading psychologists and their theories and how psychological theories relate to contemporary life. The formation of human personality is analyzed and examined with regard to the role of the individual in human society.

This course is a course of choice and does not fulfill a core credit in Social Studies for graduation. This course alternates with Sociology and will NOT be offered in the 2024-2025 school year.

# Sociology (HS360)

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.03 (Level II)

Sociology is intended for college-bound juniors and seniors. The foundations of society, social inequality, social institutions and social change provide areas for study in the course. The course emphasizes understanding human relationships and the importance of citizens in shaping social environments.

This course is a course of choice and does not fulfill a core credit in Social Studies for graduation. This course alternates with Psychology and WILL be offered in the 2024-2025 school year.

# **TECHNOLOGY EDUCATION**

Foundations of Engineering Design (HS570)

Grade Level: 9, 10 Length of Course: 90 days Credits: .5 Weight: 1.00 (Level I)

Foundations of Engineering Design is an activity-based course where students build upon previous experiences to study mechanical drawing and CADD concepts, production technology and power technology with a heavy emphasis on the Engineering Design Process. Students will be required to participate in work experiences in each area, through which they will learn to design, problem solve and complete projects using various materials and processes. This course is designed to prepare students for the Engineering Design pathway, culminating in the Engineering Design Capstone course.

# CADD (Computer Aided Drafting and Design) (HS571)

Grade Level: 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

This course will concentrate on the development of skills in mechanical and architectural design. The concepts of mechanical drawing will be introduced through activities using sketching, manual drafting, and CADD software. Course content will include engineering geometry, multi-view drawings, pictorial presentation, and working drawings. The concepts of architectural drawing will focus on the principles associated with residential design and construction. Upon completion of this course, students will have experience drawing both mechanical parts and objects and architectural house plans. The use of both board drafting and CADD programs will be used utilized throughout the course. Students will also have the opportunity to 3D print an object that they have designed using CADD software.

### **Engineering Design Capstone (HS592)**

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.06 (Level III)

Prerequisite: Foundations of Engineering Design; CADD; Power Technology I; Woodworking I; Welding

and Machining OR Metalworking I

The Engineering Design Capstone course is a project-based course weighted at an honors-level. This course will require knowledge gained in each of the prerequisite courses to be used in completing a real-world technical problem solving challenge. Students will be required to do extensive research on the selected problem in order to develop a viable solution. Students will produce a model using CADD software prior to developing a prototype using metalworking, woodworking and 3D printing technologies prior to creating a final product.

# Home Repair and Construction (HS552)

Grade Level: 10, 11, 12

Length of Course: 90 days
Credits: .5

Weight: 1.00 (Level I)

This course is designed to instruct students on simple home repairs and basic construction, while also teaching them to read a drawing on planned construction. The course will concentrate on the basic layout of walls, windows, trim and stairs in residential construction and touch upon simple home repairs such as replacing worn parts on faucets, toilets, lighting fixtures etc. Students will also be instructed on the proper safety and use of power tools.

### Metal Manufacturing I (HS554)

Grade Level: 9, 10, 11, 12

Length of Course: 90 days
Credits: .5

Weight: 1.00 (Level I)

Students will design and engineer a simple product, which will be produced in a metal manufacturing environment. Items will be marketed and sold with a simulated business venture, including a cost analysis. Students will also have the opportunity to design and complete individual projects. Students will be challenged with problem solving activities, which will include hands-on metal manufacturing processes including: CNC Plasma Cam design, welding, oxy acetylene torch cutting, lathe/mill machining, forging and casting. Students will be guided through SAFE machine operation and are required to demonstrate all safe operating procedures.

### Metal Manufacturing II (HS555)

Grade Level: 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

Prerequisite: Metal Manufacturing I or Power Technology II

This course is designed to expand upon the knowledge learned in metal manufacturing I. Design and fabricate a complex product, which will be produced in a metal manufacturing environment. Items will be marketed and sold with a simulated business venture, including a cost analysis. Students will also have the opportunity to design and complete individual projects. Students will be challenged with problem solving activities, which will include hands-on metal manufacturing processes including: CNC Plasma Cam design, welding, oxy acetylene torch cutting, lathe/mill machining, forging and casting. Students will be guided through SAFE machine operation and are required to demonstrate all safe operating procedures.

# Power Technology I (HS557)

Grade Level: 9, 10, 11, 12

Length of Course: 90 days

Credits: .5

Weight: 1.00 (Level I)

This course is designed to provide students with skills in power technology. Students will cover technical aspects in the major areas of mechanical, electrical, and fluid power. Students will be challenged with problem solving design activities, which will include hands-on fabrication of projects applying one or more areas of power technology, including:

Mechanical	Electrical	Fluid
Small gas engines	Basic electricity	Pneumatics
	principles	
Simple Machine principles	House Wiring	Hydraulic

Students will be guided through SAFE machine operation and are required to demonstrate all safe operating procedures.

# Power Technology II (HS558)

Grade Level: 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

Prerequisite: Power Technology I

This course is designed to expand upon the knowledge learned in Power Technology I. Students will review and focus on advanced areas of mechanical, electrical, and fluid power. Students will be challenged with more advanced problem solving activities, which will include hands-on fabrication of projects applying one or more areas of power technology. Students will be guided through SAFE machine operation and are required to demonstrate all safe operating procedures.

# Woodworking I (HS563)

Grade Level: 9. 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

This course is designed to allow students to work in a simulated production facility. Students will work in a woodworking environment to design products, machine fixtures, shop layout and other aspects of production technology. Students will be guided through SAFE machine operation and are required to pass safety exams. The course will also involve students in a guided production run that builds upon their student-designed production plans. Individual project work will be incorporated throughout the course.

# Woodworking II (HS564)

Grade Level: 10, 11, 12

Length of Course: 90 days

Credits: .5

Weight: 1.00 (Level I)

Prerequisite: Woodworking I

This course is designed to reinforce what is taught and learned in Woodworking I. Students will be guided through SAFE machine operation and are required to pass safety exams. This production class will form a business-like atmosphere to research, design, produce, package, and market a product.

- Product research and	- Facility, machine fixture,	- Final production of product
design, marketing	and package design	- Individual project work
- Machine safety	- Career research	

The course will include a section on job opportunities and is intended to reflect the growing, expanding interest in production technology.

### Woodworking III (HS565)

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.03 (Level II)

Prerequisite: Woodworking I; Woodworking II

Woodworking III is an advanced level woodworking course for those who want to build their woodworking skills and knowledge or are interested in pursuing a career in fine woodworking. Woodworking III will build on the skills developed in levels I and II. Instruction will include constructing cabinetry-style casework, advanced joinery and advanced project design and layout.

# Technology Education Independent Study (HS590)

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.03 (Level II)

Prerequisite: Instructor's approval

This independent study is for a student who excelled in any Technology Education I & II classes. The student will form a contract with the instructor and will need to meet the guidelines of the contract for course credit. Students will be guided through SAFE machine operation and are required to demonstrate all safe operating procedures.

# **WELLNESS**

Physical Education – Grade 9 (HS801)

Grade Level: 9 Length of Course: 45 days Credits: .25 Weight: 1.00 (Level I)

Completion of 9th-grade Physical Education is required for graduation.

This course MUST be successfully completed before a student can take any other elective physical education course and must be taken during the freshman year. The course emphasizes physical fitness and modified small-sided team games. This course is designed to help students consider opportunities to participate in interscholastic activities within the community, as well as, develop the student's physical fitness. *This course is required for all ninth-graders and alternates every other day with Freshmen Seminar for one semester.* 

Health (HS810)

Grade Level: 10 Length of Course: 45 days Credits: .25 Weight: 1.00 (Level I)

Completion of Health is required for graduation.

An examination of mental, emotional, physiological and social health issues of young adults occurs in this course. Emphasis on healthful decision-making, long- and short-term goal setting, and looking into the future of one's quality of life will be discussed, debated and researched. Students will be engaged in learning aspects of human anatomy and physiology related to problems associated with disease prevention and how to determine and access good healthful information based on reliable media and other associated sources of information.

### **Driver Education and Safety (HS811)**

Grade Level: 10 Length of Course: 45 days Credits: .25 Weight: 1.00 (Level I)

Completion of Driver Education and Safety is required for graduation.

The Safety and Driver Education class prepares students to become responsible drivers. Classroom work involves areas such as drivers' attitude and responsibility. A comprehensive study of the Pennsylvania Driver's Manual will be an integral part of the course.

# Physical Education Options for Grades 10, 11, & 12

Students must successfully complete two of the following course options in order to fulfill graduation requirements.

**Adventure Activity (HS820)** 

Grade Level: 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

Prerequisites: A minimum grade of 80% or higher in the most recent Physical Education class and

teacher recommendation

This co-educational course is designed for students in grades 10-12 interested in Adventure and Lifetime activities. Course activities include orienteering, team building, trust activities, walking, frisbee golf, and shuffleboard. Students will participate in intense activities to produce strength gains and improve their overall health and well-being.

**Creative Movement (HS821)** 

Grade Level: 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

This coeducational course is designed for students to experience alternative forms of fitness activities. Course activities include fitness training, pilates, kick boxing, step aerobics, "core" exercises, yoga, circuit training and dance choreography experiences.

Creative Movement II (HS825)

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.00 (Level I)

Prerequisite: Successful completion of Creative Movement I

This coeducational course is designed for students to continue their experience of alternative forms of fitness activities through interpretive dance. Course activities include historical dance forms, ethnic dance forms, interpretive dance forms plus a more in-depth dance choreography experience.

Net Results - Racquet Attack (HS822)

Grade Level: 10, 11, 12

Credits: .5

Length of Course: 90 days

Weight: 1.00 (Level I)

This coeducational course is designed for students to experience a variety of lifetime sports. The class will enable students to identify activities that can be pursued later in life as a means of maintaining or increasing physical fitness. Portions of the course include fitness training and various activities such as tennis, softball, ultimate frisbee, pickle ball, ping pong, volleyball, team handball, and badminton.

# **Optimal Performance (HS826)**

Grade Level: 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.00 (Level I) Prerequisite: A minimum grade of 90% or higher in Strength Training or instructor approval

This course is designed for the student who enjoyed and excelled in Strength Training. The course will review and build on the principles taught in Strength Training and will guide students in more intensive training than Strength Training. Students will take part in Olympic lifting, Endurance Training, SAQ (Speed, Agility, and Quickness) Training, and Metabolic Conditioning. This course is perfect for any athlete looking to improve sport performance or any students interested in improving their strength and cardiovascular endurance.

# PIAA Sports Officiating (HS827)

Length of Course: 90 days Grade Level: 11, 12 Weight: 1.00 (Level I) Credits: .5

Prerequisite: An 80% or higher in all prior required PE courses.

The PIAA Sports Officiating course is for those junior or senior students who are interested in learning the rules of various PIAA sports. Students who complete the course will have the option of becoming certified as a PIAA official in one or more of the studied activities. This course will also cover the basic requirements, knowledge, skills and mechanics necessary to be an official for each sport studied. Sports that will be covered include basketball, soccer, field hockey, softball, and baseball. This course provides students with an outstanding way to get involved with and give back to the community as a youth sports official.

#### Strength Training (HS823)

Grade Level: 10, 11, 12 Length of Course: 90 days Credits: .5 Weight: 1.00 (Level I) Prerequisite: A minimum grade of 90% or higher in the most recent Physical Education class or recommendation of instructor

This coeducational course is designed for students interested in Strength Training and Conditioning. This course focuses solely on Strength Training and Conditioning and does not include games or recreational activities. Students will participate in an intense strength and aerobic training program designed to produce strength gains and improve their overall health and well-being.

#### Team Aerobic Games (TAG) (HS824)

Grade Level: 10, 11, 12 Length of Course: 90 days Weight: 1.00 (Level I) Credits: .5

This course is designed for students to experience an intense game environment. Course activities include fitness training, football, soccer, softball, floor hockey, basketball, stx ball, volleyball, handball, gatorball and speedball. This course is for the student seeking rigorous activities in a highly competitive environment.

# **WORLD LANGUAGES**

Spanish I (HS401)

Grade Level: 9, 10, 11, 12

Credits: 1

Length of Course: 180 days

Weight: 1.03 (Level II)

Prerequisite: Concurrent enrollment in Honors or CP Literature, Analysis, and Composition and a 70% or higher in the previous year's English Language Arts course is strongly recommended. Students should also have a strong understanding of English grammar, syntax and vocabulary.

This course is an introductory course that emphasizes the three modes of communication within the target language: interpersonal, interpretive, and presentational. The course begins the study of basic and fundamental grammar skills including present communication and mastery of high frequency vocabulary and structures from a variety of topics related to students' lives. Knowledge of the Spanish language and cultural awareness are valuable assets in our global community.

Spanish II (HS402)

Grade Level: 9, 10, 11, 12

Length of Course: 180 days

Credits: 1

Weight: 1.03 (Level II)

Prerequisite: Spanish I (70% or higher)

This course maintains and increases proficiency with language control, vocabulary, and communication strategies within interpersonal, interpretive, and presentational modes of communication. Narration in both present and past tense is emphasized. This information is covered within the context of the contemporary Spanish-speaking world and its culture.

Spanish III (HS403)

Grade Level: 10, 11, 12

Credits: 1

Length of Course: 180 days

Weight: 1.06 (Level III)

Prerequisite: Spanish II (75% or higher) or teacher recommendation

This honors-level course continues building cultural awareness, language control, vocabulary and communication strategies across the three modes of language learning: interpersonal, interpretive, and presentational. Work on reading skills is intensified using works by noted Spanish authors. Advanced grammar skills are introduced and the students become more acquainted with information on situations in everyday life.

Spanish IV (HS404)

Grade Level: 11, 12 Length of Course: 180 days Credits: 1 Weight: 1.06 (Level III)

Prerequisite: Spanish III (75% or higher) or teacher recommendation

This honors-level course continues the development of language acquisition across the three modes of communication in the target language. Works of noted Spanish and Latin American artists and authors are included. Students further develop skills in describing and narrating in all major time frames, using connected discourse of paragraph length.

### AP Spanish Literature and Culture (HS405)

Grade Level: 12 Length of Course: 180 days Credits: 1 Weight: 1.12 (Level IV)

Prerequisite: Spanish IV (80% or higher) and teacher recommendation

This Advanced Placement course is conducted in Spanish and culminates with the AP Spanish Literature and Culture exam, which students complete in May. This course introduces students to the formal study of a representative body of texts from the Spanish-speaking world, spanning history from the Middle Ages to the present day. All works on the official AP Spanish Literature reading list will be read, discussed and analyzed in the target language. In addition to a deeper understanding of the Spanish language and culture, this course encourages analytical thinking, cross-cultural understanding, and cross-curricular connections: particularly reinforcing the skills and comprehension of English literature and world history coursework.

# French I (HS411)

Grade Level: 9, 10, 11, 12

Credits: 1

Length of Course: 180 days

Weight: 1.03 (Level II)

Prerequisite: Concurrent enrollment in Honors or CP Literature, Analysis, and Composition and a 70% or higher in the previous year's English Language Arts course is strongly recommended. Students should also have a strong understanding of English grammar, syntax and vocabulary.

In this course, students will begin their studies by focusing on situations that are common in daily life. They will build an important foundation starting with fundamental grammatical topics that will establish success for future levels. As the course progresses, students will create fun and interesting projects in the target language to showcase their learning. They will also start to develop cultural awareness by increasing their understanding of the traditional and geographical aspects of French speaking countries.

### French II (HS412)

Grade Level: 9, 10, 11, 12

Length of Course: 180 days
Credits: 1

Weight: 1.03 (Level II)

Prerequisite: French I (70% or higher)

French II continues the development of conversational and grammatical skills focusing on the 3 modes of communication by integrating listening, speaking, reading and writing activities. Several new verb tenses will be presented as well as useful vocabulary that will allow students to communicate more effectively in a variety of situational activities. Students will continue to highlight their abilities with creative opportunities and projects.

# French III (HS413)

Grade Level: 10, 11, 12

Credits: 1

Length of Course: 180 days

Weight: 1.06 (Level III)

Prerequisite: French II (75% or higher) or teacher recommendation

Through the units in French III, students will develop stronger reading, writing, speaking, and cultural competences along with new vocabulary groups and verb tenses. The three modes of communication—Interpersonal, Interpretive and Presentational—will continue to be stressed in order to increase fluency and self-confidence in the target language. Students will continue to use a wide array of technologies to complete fun and interesting projects that demonstrate their learning.

# French IV (HS418)

Grade Level: 11, 12 Length of Course: 180 days Credits: 1 Weight: 1.06 (Level III)

Prerequisite: French III (75% or higher) or teacher recommendation

French 4 is an honors levels course, which builds upon grammatical concepts from previous classes. It is designed to provide the advanced learner of French an opportunity to strengthen oral fluency; improve presentational and interpersonal writing; expand upon knowledge of other content areas finding many connections to French history, geography, art, music and literature; and analyze contemporary issues. The class will be conducted in French and students will need to express themselves in French. Students will also read more sophisticated French passages as they progress through the course.

# AP French Language and Culture (HS417)

Grade Level: 12 Length of Course: 180 days Credits: 1 Weight: 1.12 (Level IV)

Prerequisite: French IV (80% or higher) and teacher recommendation

The AP French Language and Culture course emphasizes communication (understanding and being understood by others) by applying interpersonal, interpretive, and presentational skills in real-life situations. It engages students in an exploration of culture in both contemporary and historical contexts, while developing awareness and appreciation of cultural products, practices and perspectives. To best facilitate the study of language and culture, the course is taught in French with a strong focus on vocabulary usage and language control. The course culminates with the AP French Language and Culture exam in May.

# **MISCELLANEOUS**

**Emergency Medical Technician (EMT) (HS915)** 

Grade Level: 10, 11, 12

Length of Course: 180 days

Credits: 1

Weight: 1.12 (Level IV)

Prerequisite: Students must be 16 years of age prior to the certification exam that is administered at

the end of March.

The EMT course is open to students of all academic abilities who have a strong desire to achieve National and State EMT Certification. Students with this desire should have the confidence in knowing that students of all levels have successfully completed this program and have become certified Emergency Medical Technicians.

This rigorous course prepares students to become a PA Certified Emergency Medical Technician (EMT). Students who are 18 years of age at the time of the exam will also be eligible to become a Nationally Certified EMT.

EMT certification is a prerequisite to the Paramedic Program. Harrisburg Area Community College may provide students who successfully attain EMT Certification through ELCO with college credits (3 credits for the class & 3 credits for one year of EMS experience). These credits could be transferable to the school the student attends after graduation.

This course will set the student apart from other applicants pursuing any career, but particularly in the arena of medicine, and will be invaluable in their preparation to enter the medical field. It will enable the student to obtain a full time, part time or volunteer job as an EMT. One of the objectives of this course is to provide the students with opportunities to explore allied health programs offered by other educational institutions. Additionally, the student will be provided with the necessary skills enabling him/her to successfully deal with emergency situations occurring at school or in their personal life as well as to perform a community service. *Students will be required to attend evening classes and to purchase supplies and books needed for this course.* 

Students who are enrolled in the EMT course may have the opportunity to:

- Respond to REAL emergency calls with a local EMS agency both during the school day and outside of school.
- Staff our in-house Emergency Response Team
- Participate in a vehicle rescue class where the student will learn to dismantle cars to gain quick access to victims including breaking glass, removing the roof and doors.
- Perform a heart and lung dissection lab

# **Independent Study (HS912)**

Grade Level: 12

Credits: .5

Veight: 1.03 (Level II)

Prerequisite: Students must receive the approval of the faculty advisor for their Independent Study project.

The Independent Study course is a semester-long option that enables the student to pursue a project of their own design related to a content area of interest or further study related to future plans and aspirations. A faculty mentor must approve and supervise the student's Independent Study and will provide guidance to the student through the semester.

# **WORK-BASED LEARNING**

Students will indicate interest in these opportunities through the course request process but will select a full course schedule during the request process.

Once the required paperwork is completed and the student's work-based learning experience is approved, the student's schedule will be modified as necessary.

Internship (HS911)

Grade Level: 12 Length of Course: 90 days Credits: .5 Weight: 1.00 (Level I)

Prerequisite: Counselor approval

Internships are career preparation work-based learning experiences focused in a particular occupational area in which the student has interest. In order to qualify for an internship experience, the student must be current with all credits needed to fulfill graduation requirements, have a strong attendance record, and no major discipline issues. No costs for students to complete an internship experience will be incurred by the District. Transportation will be the responsibility of the student. Approved students must maintain a weekly journal of their experiences that will document their activities, reflections, and progress toward meeting established learning objectives. An adult-professional at the site of the student's internship must agree to serve as a mentor/supervisor for the student and are required to obtain school volunteer background clearances as required by the Pennsylvania Department of Education. An application will be required for admission to the Internship program. *This course will be graded on a pass/fail basis*.

## **Work-Based Learning Experience (HS735)**

Grade Level: 12 Length of Course: 90 days Credits: .5 Weight: 1.00 (Level I)

Prerequisites: Career Connections strongly recommended

Students may apply to complete a work-based experience in the local business community. This experience will involve the student in working a minimum number of hours per week in a local business that is located no more than 20 minutes from the high school building and will provide the student with an opportunity to earn elective credit. To qualify for a work-based learning experience, the student must be on track to complete all credits needed to fulfill graduation requirements, have no significant attendance issues, and no major disciplinary infractions. Students will be required to complete periodic assignments and submit weekly reflective journal entries along with weekly work schedules. Periodic evaluations and meetings will be organized by the work-based learning coordinator to ensure student learning and progress towards the learning objectives. An adult-professional at the site of the student's work experience must serve as the student's mentor/supervisor and must obtain school volunteer background clearances as required by the Pennsylvania Department of Education. Students may complete two semesters of a work-based learning experience during their senior year.



# **Career and Technology Center**

PROGRAMS (2024-2025)

Selecting a career is one of the most important decisions a student can make. We encourage all students to consider programs offered at the Career and Technology Center (CTC).

For further information, check our website at www.lcctc.edu.

# Did you know . . .

- CTC students excel in a "learning by doing" environment which combines academics and lab work.
- CTC students earn college credits from community colleges and technical schools by successfully completing CTC courses.
- CTC students receive scholarships from area businesses who recognize excellent craftsmanship and academic achievement.
- CTC students continue to participate in sports and extracurricular activities at their high schools.

- Cooperative Education, Clinical Experience and Job Shadowing services expand the CTC curriculum by providing students with additional skills through supervised work experience at local businesses. In addition to the cooperative education program, job placement services are available to all graduates.
- The CTC provides counseling services to assist students with personal and social issues, decisions related to career choice, and decisions related to postsecondary opportunities and college credits.
- ❖ The CTC provides support to students who are disabled or disadvantaged. The support is designed to help each student successfully complete the program and secure employment or postsecondary education.
- ❖ The CTC takes every opportunity to recognize and reward students who strive for excellence. This recognition includes: National Technical Honor Society, scholarships, student-of-the-month and year awards, outstanding achievement, perfect attendance, honor roll, certificates and extensive recognition for student organization achievements.
- Student participation in program related organizations is strongly encouraged. They provide each student with opportunities to develop leadership skills, excel in technical skills, receive recognition for state and national competitions, and travel throughout the state and nation. The organizations include:

LCBA – Lebanon County Builders Association –Student Chapter HOSA – Health Occupations Students of America SkillsUSA – Vocational Industrial Clubs of America National FFA Organization

# HALF-DAY TWO YEAR PROGRAMS

Sixteen CTC programs are offered for a half-day for two years. These programs are open to students beginning in the junior year.

Auto Body Technology
Automotive Technology
Carpentry/Residential Construction
Diesel Truck Technology
Electrical Technology
Electromechanical Technology
Health Careers Technology
Landscape & Horticulture Technology

Law Enforcement & Security

Masonry

Medical Assistant

Network Technology

Plumbing/Heating/Air Conditioning

Precision Machining Technology

Sports Therapy Sciences

Welding Technology

# **AUTO BODY TECHNOLOGY**

(HALF-DAY, 8:05 A.M. – 10:40 A.M. – YEAR ONE) ------(36 WEEKS, 3 CREDITS) (HALF-DAY, 11:35 A.M. – 2:10 P.M. – YEAR TWO) ------(36 WEEKS, 3 CREDITS)

Auto Body Technology students learn entry level processes to repair damaged vehicles to pre-accident/damaged conditions. These repair processes are taught in units over two years. The first year consist of smaller projects involving learning knowledge and skills for Safety, Detailing, Welding and Cutting, Refinishing Equipment, Masking, Surface Prep, Automotive Finishes, Paint materials mixing and application, Vehicle Construction and Estimating. The second year consist of larger projects and vehicles involving learning the knowledge and skills for Plastic Repair, Panel Replacement and Alignment, Trim and Hardware R&I, Glass and Hardware R&I, Structural component damage Analysis (Measuring) and Repair, Restraint Systems and Advanced Technologies (ADAS). Career opportunities: Detailer, Estimator assistant, Parts manager, Refinishing/Painting/Prep apprentice (Paint Tech assistant), Damage Repair (Body Tech assistant), Insurance estimator/appraiser, Office Manager, Floor Manager, Paint and Body sales representative. Students also may earn ICAR and OSHA Certifications before graduating high school. Students who meet the requirements may participate in our Co-op program in their second year, working at an Auto Body employer, gaining more experience, while being paid.

### **AUTOMOTIVE TECHNOLOGY**

Automotive Technology students diagnose, service, and repair late model vehicles following the Automotive Service Excellence (ASE) national technician standards. Motivated students may obtain the PA Auto Safety Inspection Certification, PA Emission Inspection Certification and qualify to take the ASE tests after successfully completing the program. Utilizing state-of-the-art repair equipment students learn brake systems, suspension and steering, engine performance, automotive electronics, and HVAC. The Automotive Technology program is ASE Accredited. Technical career opportunities range from maintenance mechanic to automotive technician and may begin in high school with our Co-Op program providing job experience and a salary. Students who successfully complete the program may receive 16 college credits from HACC. In addition, students may also earn credits from University of Northwestern Ohio, Automotive Training Center, and Northampton Community College.

# CARPENTRY/RESIDENTIAL CONSTRUCTION

Carpentry students work on construction projects within the school and community. They learn skills including: transit and blueprint reading, selection of building materials and estimating, framing (floors, stairs, walls, and roofs), selection and installation of windows and doors, roofing, interior and exterior finishing, concrete finishing, and foundations. Career opportunities range from a siding installer to a finish carpenter and may begin in high school with a Co-Op position providing job experience and a salary. The 500 employers in the Lebanon County Builders Association sponsor this program, provide student scholarships, and employ graduates. Students who successfully complete the program may receive college credits from HACC, Penn College of Technology, and Thaddeus Stevens College of Technology.

# **DIESEL TRUCK TECHNOLOGY**

Diesel Truck Technology students restore late model over-the-road diesel truck-tractors to like new condition. Each year they refurbish or repair vehicles providing "hands-on" experience in diagnosing, servicing and repairing all major heavy truck systems. Students learn the importance of teamwork and qualify for the PA State Safety Inspection program. The major course topics include: Preventive Maintenance, Engine Systems Theory & Repair, Electrical Systems, and Brakes (air & hydraulic), Power Trains, Steering, Suspension and Drivelines. Career opportunities range from maintenance mechanic to fleet manager, and may begin in high school with a Co-Op position providing job experience and a salary. Employers in the South Central Motor Truck Association sponsor this program, provide student scholarships, and employ graduates. Students who successfully complete the program may receive college credits from the University of Northwestern Ohio (UNOH) and Automotive Training Center.

# **ELECTRICAL TECHNOLOGY**

Electrical Technology students design and install the electrical systems in the school's construction projects and work on numerous projects within the community. They learn technical skills including AC/DC fundamentals, Ohm's Law, Kirchoff's Laws, residential, commercial and industrial wiring, transformers, conduit bending, troubleshooting, fire alarm systems and green technologies. Technical careers range from an electrician to a systems engineer and may begin in high school with a Co-Op position providing job experience and a salary. The 500 employers in the Lebanon County Builders Association sponsor this program, provide student scholarships and employ graduates.

### ELECTROMECHANICAL TECHNOLOGY

The Electromechanical Technology program is designed to provide students with the knowledge and skills necessary to apply current methods and technology to the development, design, operation, and management of electromechanical systems. Electromechanical covers multiple disciplines including Electrical, Electronics, Fluid Power (Hydraulics and Pneumatics), Mechanical Drives, Programmable Logic Controllers (PLC's), and Robotics. Students are trained in both the electrical and mechanical disciplines, and then exposed to a wide spectrum of instrumentation and industrial controls concepts. Students can use what they learn in Electromechanical Technology to pursue a career directly out of high school or continue their education into a degree program. The course is designed to give an introduction to engineering principles of electromechanical systems and disciplines. Some of the potential jobs include Electronics Technicians/Engineer, Electrician, Biomedical Technician/Engineer, Industrial Maintenance Technician, Mechanical Technician/Engineer, and many more!

# **HEALTH CAREERS TECHNOLOGY**

Health Careers Technology is designed for students seeking a career in the healthcare field specifically as a patient care technician certification/Nurse Aide. Students will learn to care for patients in varying healthcare settings, which is a requirement to take the patient care technician certification exam offered at the end of the senior year. Students will also obtain certification in Adult/Child/Infant CPR/AED/First Aid through the American Red Cross.

Curriculum includes patient safety, professionalism of the health care provider, legal and ethical issues, communication skills, infection control practices, emergency care and disaster preparedness, human needs and development, health care provider skills, nutrition, caring for the patient at death, medical terminology, anatomy and physiology and exploring medical language.

Students have an opportunity to obtain 3 college credits through participation in the college in the high school program offered through HACC.

### LANDSCAPE AND HORTICULTURE TECHNOLOGY

In the Landscape Technology program, students learn how to use horticultural tools and operate landscaping equipment such as push mowers and zero turns. Students will identify ornamental, medicinal, and crop producing plants, work with plants outdoors and participate in the greenhouse plant sale. Experience many career pathways in horticulture through field trips, hands on experiences, and academics. Students will be involved with the National FFA Organization and will have a chance to compete in horticultural competitions against local FFA chapters. Qualified students in Landscape Technology may also be chosen for the co-op program, an opportunity to work for area landscape contractors and earn while you learn. If you enjoy working outdoors with plants, learning about horticultural skills and maintaining landscapes, then the horticulture and landscape technology program will be a great fit and learning experience for you.

### LAW ENFORCEMENT AND SECURITY

Law Enforcement and Security students develop investigation skills essential to careers in Criminal Justice (Police, Courts, and Corrections) and the ever-growing Private Security fields. They also have the opportunity to experience parts of the Criminal Justice System through job shadowing experiences in the real world. The program emphasizes curriculum that covers topics such as: criminal procedures, crime photography, criminal investigations, criminal law, Bill of Rights/US Constitution, vehicle law, private security, report writing, and first aid/CPR. Career opportunities range from private security to local, state, and federal officers and federal police officers. Students who successfully complete the Pennsylvania Department of Education approved program and the NOCTI exam (end of the year assessment) on the criminal justice system may receive college credits from HACC and other area colleges.

MASONRY

Masonry students work on construction projects that include concrete block, brick and other similar materials. Most of the training is within the school; however, community service projects add additional learning opportunities. Students develop a highly skilled craft which includes the ability to lay a multitude of contemporary concrete building products as well as traditional brick. Additional topics include: blueprint reading, site layout, estimating, building codes, and the use of hand and power tools. Career opportunities range from a mason's helper to blocklayer, bricklayer, estimator, or construction supervisor and may begin in high school with a Co-op position providing job experience and a salary. The 500 members in the Lebanon County Builders Association as well as the Pennsylvania Concrete Masonry Association sponsor this program, provide student scholarships and employ graduates.

A student who successfully completes this program may earn three college credits from HACC.

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, biology, medical terminology, medical law and ethics, pharmacology, clinical and administrative skills such as phlebotomy, vital signs, CPR and AED certification and performing electrocardiograms.

# **NETWORK TECHNOLOGY**

(HALF-DAY, 8:05 A.M. – 10:40 A.M. – YEAR ONE) -----(36 WEEKS, 3 Credits) (HALF-DAY, 11:35 A.M. – 2:10 P.M. – YEAR TWO) -----(36 WEEKS, 3 Credits)

Network Technology – In today's high-tech environment, everything is networked!!! Following the CompTIA Network + Certification model, students learn the features and functions of networking components including how to install, configure and troubleshoot basic networking hardware, protocols and services. Completion of this course will prepare students for entry-level jobs in computer networking or give them a boost as they continue their education while pursuing a career as a network administration, network support technician, network administrator or network analyst. Fundamental topics to be covered include: The Foundations of Networking, the OSI/802 Model, Network Design, Network Cabling, Wireless Communication, TCP/IP, WAN Devices, Security Issues and Disaster Recovery Training. The goal is for students to seek Network+ certification after completion of the course. Students who successfully complete the program may receive up to four college credits awarded by accredited colleges or technical schools.

# PLUMBING, HEATING, AIR CONDITIONING

Students interested in the plumbing profession can begin their training at the CTC in the Plumbing, Heating, and Air Conditioning program which is a Pennsylvania Builders Association accredited program and tailored after the Pennsylvania College of Technology's first year HVAC skills list .They will begin their technical training learning safe work practices, materials and tools used in the trade, and applied mathematical and scientific concepts needed to build a strong foundation for more advanced topics. Our students "learn by doing" by working on a variety of skills trainers and equipment designed to simulate actual field installations. Students also have the opportunity to earn industry recognized certifications such as the OSHA 10 construction safety certification and the EPA Section 608 Refrigerant Transition and Handling certification. Dual enrollment opportunities with Thaddeus Stevens College of Technology are also available while enrolled in the program.

Post-secondary opportunities exist for those completing the CTC Plumbing, Heating, and Air Conditioning program such as craft apprenticeships where students "earn while they learn" graduating debt-free from industry recognized programs. Associate and Bachelor degree programs are available for those choosing careers as sales engineers, designers, and similar professions requiring advanced degrees.

### PRECISION MACHINING TECHNOLOGY

Precision Machining Technology students manufacture precision parts in the school's NIMS (National Institute for Metalworking Skills) accredited training center. The curriculum provides in-school instruction on topics such as: Blueprint Reading, Measurements, Quality Control, Hand Tools, Manual Lathes, Manual Mills, CAD/CAM, and CNC (Computer Numerical Controlled) Machines. Students will work hands on in the shop creating various parts and tools they are able to put in their own toolboxes. Career opportunities range from manual machine operator to tool and die maker, CNC operator to CNC programmer, mechanical engineer to quality engineer, even sales and service. Many students have the opportunity in high school to participate with a Co-Op experience providing real on the job experience and a salary. Students who successfully complete the program may earn their OSHA 10 certification, Pennsylvania's Pre-Apprenticeship Machinist Journeyman Certificate, and up-to 11 NIMS credentials, as well as the opportunity to earn advanced placement in Thaddeus Stevens College of Technology Computer Integrated Machining Program, reducing their time at Stevens from four semesters to only three.

# **SPORTS THERAPY SCIENCES**

Sports Therapy Sciences students participate in theory and experiential learning to gain advanced knowledge of the systems of the human body, sports medicine techniques as well as health and wellness concepts. The students will engage in activities to identify, manage and treat sports related conditions and injuries. Students will also conduct pre-participation health and fitness assessments to design individual exercise programs. From these experiences, students are encouraged to continue their studies in fields such as athletic training, physical therapy, occupational therapy, exercise physiology, personal training and other medical and health and fitness related fields. The Sports Therapy Sciences curriculum includes: human anatomy and physiology, medical terminology, first aid and CPR, injury management and personal fitness training. At the conclusion of the program, the student will be eligible to take a national certification examination for personal training.

# WELDING TECHNOLOGY

(HALF-DAY, 8:05 A.M. –10:40 A.M. – YEAR ONE) ------(36 WEEKS, 3 CREDITS) (HALF-DAY, 11:35 A.M. –2:10 P.M. – YEAR TWO)-----(36 WEEKS, 3 CREDITS)

Welding Technology students design, fabricate and repair metal products in the school's shop facilities. They develop skills in testing procedures necessary to meet standards for welding certification and practice welding techniques according to the requirements of the American Welding Society. Utilizing state-of-the-art equipment, students learn shielded metal, gas metal, gas tungsten and flux core arc welding, blueprint reading, oxy-fuel cutting, metal layout and fabrication, computerized numerical control cutting, plasma cutting of sheet and plate metals, and structural and robotic welding. Technical careers range from a metal fabricator to an underwater welder. These opportunities may begin in high school with a Co-Op position providing job experience and a salary. Students who successfully complete the program may receive six college credits from HACC or entry level welder certification. The program is nationally recognized by the AWS (American Welding Society).

# **FULL - DAY PROGRAMS**

Five CTC programs are offered for a full day, 8:05 A.M. -2:10 P.M. The programs are open to seniors.

Commercial Art and Design
Culinary Arts
Dental Assistant
Media Communications Technology
Pastry Arts

COMMERCIAL ART AND DESIGN

(FULL-DAY, 8:05 A.M. – 2:10 P.M.) -----(36 WEEKS, 7.5 CREDITS)

Commercial Art students work with a variety of media to create logos, brochures, posters, advertisements, greeting cards and a variety of artwork for the school and the community. They participate in an end-of-the-year Art Show and Competitions to develop a portfolio emphasizing their creative talents and technical skills including becoming proficient in Adobe Design software: Photoshop, Illustrator, and InDesign. This "learning while doing" strategy brings reality to the course topics, which includes typography, media techniques, color theory, graphic design, perspective drawing, elements and principles of design and computer applications. This full day, senior year course promotes creativity and expression through fine art, graphic design and photography. Career opportunities range from a production artist to a creative director. Adobe Certifications can be achieved through BrainBuffet and the Certiport Company. Graduates have been successful at four-year colleges and a number of students have won scholarships at two-year art schools. Students who successfully complete this program will have proficient knowledge and ability to further their graphic design career path in a post-secondary setting.

### **CULINARY ARTS**

# (FULL-DAY, 8:05 A.M. – 2:10 P.M.) -----(36 WEEKS, 7.5 CREDITS)

Culinary Arts students operate a contemporary sixty-seat full-service restaurant located within the school. Student's plan, prepare, and serve a variety of traditional, ethnic, and contemporary menus as well as cater banquets, dinner meetings, and special events. Students develop artistic skills through ice carvings and special exhibits of pastillage, pumpkin carving, gingerbread, and tallow. Local, state, and national competitions enrich the curriculum which includes appetizers, soups and sauces, vegetables and salads, meat/poultry/seafood/shellfish, desserts, garnishing, catering, service, sanitation, and management. Career opportunities range from a prep cook to eventually an executive chef. and may begin in high school with a Co-Op or clinical positions providing job experience and a salary. Students who successfully complete the program may receive college credits from PA College of Technology, HACC, Johnson & Wales University, Pennsylvania Culinary Institute, WCCC, and The Restaurant School. The program is nationally recognized and accredited by the American Culinary Federation (ACF) and holds Exemplary Status from the ACF.

**DENTAL ASSISTANT** 

(FULL-DAY, 8:05 A.M. – 2:10 P.M.) -----(36 WEEKS, 7.5 CREDITS)

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, chair-side dental assisting, radiology, dental materials, and microbiology/sterilization. During the program, students participate in clinical rotations in private dental offices, clinics, and hospitals. Experiences gained in the Dental Assistant Program prepares students to take the Radiation Health and Safety Certification Exam, the Infection Control Exam, have a steppingstone to college, and are prepared for a job after they graduate.

MEDIA COMMUNICATIONS TECHNOLOGY

(FULL-DAY, 8:05 A.M. – 2:10 P.M.) -----(36 WEEKS, 7.5 CREDITS)

Media Communications Technology program introduces students to the art and science of developing effective presentations using technology. Through a mix of classroom instruction and hands-on experience, students will be well prepared for success in today's rapidly growing communication fields.

Students gain a working knowledge of hardware, software, and equipment necessary for delivering effective communication for business, education, and entertainment. Rigorous instruction motivates students to develop competency in the production process, photography, graphic design, television production, streaming video, and audio production, as well as electronic computer imaging, motion graphics, and animation using computer technology.

In addition, curriculum is implemented through individual and group collaborative processes along with real-world experiences. A variety of software applications are taught. Using this advanced digital technology, students apply their knowledge and skills to create professional media for broadcast, virtual instruction, corporate communications, web-based distribution, and entertainment.

This course provides comprehensive hands-on experience through instruction in presentation development, project management, budgeting, and social networking. This program will enhance computer literacy, build communication skills, and yield work samples for an impressive portfolio in preparation for college and employment.

**PASTRY ARTS** 

(FULL-DAY, 8:05 A.M. – 2:10 P.M.) -----(36 WEEKS, 7.5 CREDITS)

The Lebanon County Career & Technology Center Pastry Arts program was the first nationally accredited secondary baking and pastry art program by the American Culinary Federation Education Foundation (ACF) in the country. Recently they also received Exemplary Status for never having a non-compliance on the accreditation process.

Pastry Arts students produce and market high quality baked products for a contemporary sixty-seat restaurant within the school. They also market their products through their own pastry shop as well as supplying items for school banquets, dinner meetings, community service projects, and specialty events. Students develop artistic skills through the preparation of pastries, confections, and other specialty desserts. Students will create and present a professional portfolio and restaurant programs as an end of the year assessment. Local, state and national competitions enrich the curriculum which includes: pastry bag skills, cornet skills, cake decorating and assembly, decorative pieces including a Gingerbread House and Pumpkin Carving competition, merchandising, record keeping, and sanitation. Career opportunities range from a baker's helper to a pastry chef and may begin in high school with a Co-Op position providing job experience and a salary. Students who successfully complete the program may receive college credits from Johnson & Wales, West Moreland Community College, PA College of Technology, Harrisburg Area Community College, and The Restaurant School at Walnut Hill College.

# HALF-DAY YEAR ONE AND FULL-DAY YEAR TWO PROGRAM

This program is offered for a half-day in year one and a full-day in year two. The program is open to students in the junior year.

# Cosmetology

**COSMETOLOGY** 

(HALF-DAY, 8:05 A.M. – 10:40 A.M. - YEAR ONE) -----(36 WEEKS, 3 CREDITS) (FULL-DAY, 8:05 A.M. – 2:10 P.M. - YEAR TWO) -----(36 WEEKS, 7.5 CREDITS)

Cosmetology students learn skills necessary to become a licensed professional in a salon. Major topics include hairstyling, haircutting, perming, chemical relaxing, haircoloring, manicuring, facials and makeup. Students learn the theory and procedures about these topics. When finished with the program and state mandated hours, students must take and pass a state board exam to receive a cosmetology license.

# **NON-DISCRIMINATION STATEMENT**

The Lebanon County Career and Technology Center does not discriminate on the basis of race, color, national origin, sex, disability, or age in its programs and activities and provides equal access to the Boy Scouts and other designated youth groups. The following person has been designated to handle inquiries regarding the non-discrimination policies: Assistant Director of Students, 833 Metro Drive, Lebanon, PA 17042, (717) 273-8551 ext. 2139.

# **LEBANON CTC Academic English Course Description**

All Lebanon CTC English courses are block scheduled (80 minute periods for 2 marking periods).

An academic college preparatory class covering the following topics:

### **Public Speaking Skills**

- Deliver an informative speech
- Deliver a demonstration speech

# **Writing Skills**

- Write a five-paragraph (traditional) essay
- Write a summary
- Write/create a survey

### **Employability Skills**

- Complete a job application
- Write a résumé
- Write a letter of application
- Write a thank-you letter
- Write a letter of resignation
- Apply successful employment interview skills

# **Technical Writing Skills**

- Write a set of instructions
- Write workplace memos
- Write a letter of request
- Write a progress report
- Create a PowerPoint presentation
  - 1. Survey Results
  - 2. Famous Entrepreneur Report
- Write a business proposal
- Write a business plan
- Write/create an outline
- Incorporate technical writing techniques
  - 1. Active vs. Passive Voice
  - 2. Parallel Structure
  - 3. Courtesy
  - 4. "You attitude"
  - 5. Pronoun agreement
  - 6. Misplaced Modifiers
  - 7. Wordiness and Redundancies

# **Technical Reading**

- Read and interpret information on charts and graphs
- Identify Personal Learning Style
- Identify Myers Briggs Personality Style
- Read and analyze information related to becoming an entrepreneur and creating a business plan

# **LEBANON CTC Math Course Descriptions**

### **Technical Mathematics**

A comprehensive applied math course. Topics in basic math, pre – algebra, algebra, geometry, simple trigonometry, and basic statistics are covered.

# Algebra 1 (Keystone curriculum)

College preparatory course. No prerequisite course needed. Course topics include: real number expressions, monomials and binomials, polynomials, factoring, linear equations, graphing, linear systems, functions, and data analysis.

# **Geometry & Intermediate Algebra**

College preparatory course that has ½ year of Geometry and a ½ year of Intermediate Algebra. A pre-requisite of Algebra 1 is highly recommended. Topics include: postulates and theorems of Geometry, triangles, polygons, circles, area and volume, graphing, linear systems, rational expressions, factoring, and algebraic expressions.

### Algebra 2

A college preparatory course designed for students planning post - secondary work. A pre-requisite of Algebra 1 and Geometry is recommended. Course topics include: graphing, linear systems, factoring, rational expressions, absolute value equations, intervals, slope and distance, conic sections, and functions.

### **CP Probability and Statistics**

A college preparatory course designed for students planning post - secondary work. A prerequisite of Algebra 2 is recommended. The course will introduce students with the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Course topics include organizing data, elementary and binomial probability, hypothesis testing, correlation and linear regression, and chi – square. Application problems are emphasized from business, engineering, social and biological sciences.

### **Pre-Calculus**

A college preparatory course designed for students planning post secondary work. A prerequisite of Algebra 2 is recommended. Course includes both an advanced algebra component along with a comprehensive trigonometry component. Course topics include:

algebraic expressions, rational expressions, absolute value equations, conic sections, graphing higher order polynomials, functions, exponential functions, trigonometric functions and their graphs, trigonometric identities and equations, and polar coordinates.

# **Trigonometry and Introductory to Calculus**

A college preparatory class recommended for students who are planning post – secondary work. A pre-requisite of Pre-Calculus is highly recommended. Trigonometry component topics include: radian measure and conversion, the six trigonometric functions, graphing, phase shift, identities, solving equations, and polar coordinates. Calculus component topics include: limits, 1st and 2nd derivatives, tangent line approximation, and applications of 1st and 2nd derivatives.

### Calculus 1

A college preparatory course recommended for students who are planning post - secondary work. (especially engineering) A pre-requisite of Pre-Calculus or Algebra 2 and Trigonometry is recommended. Course topics include: review of algebraic and trigonometric functions, limits, 1st and 2nd derivatives, differentiation, chain rule, tangent line approximations, applications of 1st and 2nd derivatives, integrals and their applications, and introduction to integrals.