

Solanco High School
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District Administration

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Mr. Rick Esche, Assistant Principal
TBA, Assistant Principal
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Mrs. Lindsay Capoferri
Mrs. Patti McTaggart
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Lead Teachers

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Art	Mrs. Candace Rakers
Business	Mrs. Stacy Shelton
English	Mrs. Leslie McRobbie
Family & Consumer Science	Mrs. Erin Byrnes
Guidance	Mrs. Kelly Shumaker
Health Services	Mrs. Nicole Bender
Mathematics	Mrs. Lisa Schell
Media Center	Ms. Cyndi Wasilius
Music	Mr. Scott Weyman
Science	Mr. Brett Miller
Social Studies	Ms. Cindy Sangrey
Special Education	Mrs. Danielle Booth
Technology Education	Mr. Luis Mendez
Wellness & Fitness	TBA
World Language	Mrs. Jennifer Eisenberger

SOLANCO HIGH SCHOOL
EDUCATIONAL PLANNING GUIDE
2019-2020
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SECTION I – ACADEMIC PLANNING INFORMATION

The Educational Planning Guide has been designed to assist students in developing four year educational plans. Students have the opportunity to select courses comparable to individual abilities, talents, and career goals. The guidance department and the administration reserve the right to change a student's schedule based on past academic performance and standardized testing results and to accommodate the needs of the student body. Situations may occur when a student will be unable to schedule a particular course. This may be due to prerequisites for certain courses, courses scheduled during the same period, staff and space limitations, class size, or teacher recommendation. Scheduling required core courses takes precedence over scheduling an elective.

ACADEMIC PLANNING PROCEDURE

School counselors will meet with students in class to explain the educational planning process. Teachers will recommend appropriate selections to the students. Students will use an online registration for courses to input his/her academic requests in the system. Parents are encouraged to review student course request in PowerSchool.

ADVANCED COURSES

Advanced classes are assigned by recommendation of a team of administrators, counselors, Lead Teachers and teachers. The intent of advanced level classes is to challenge students through the course work. Consideration is given to performance in previous courses plus standardized test scores. Courses are designated as "Advanced" on the school transcript.

ADVANCED PLACEMENT (AP) COURSES

Advanced Placement courses are offered through The College Board. The high school provides courses in English Literature and Composition, Calculus AB, Calculus BC, Statistics, AP Computer Science A, AP Computer Science Principles, Biology, Chemistry, Physics C, American History, European History, and Spanish Language and Culture/AP Spanish Literature and Culture. Students must have a 3.25 cumulative GPA in the subject area and teacher approval to take an Advanced Placement course. Advanced Placement courses are the only courses assigned a weighted grade for class rank purposes. Advanced Placement courses use the following grade point values:

A = 5.0 B = 4.0 C = 3.0 D = 1.0 F = 0.0

All AP Courses are divided into two parts. A grade is given for the first half at the semester due to the need for GPA and rank for seniors. In order to earn the course distinction of "AP" and the weighted grade a student must successfully complete both semesters of the course. If a student does not complete the second half of the course no "AP" distinction or weight will be received. All AP students must take the semester one (1) final exam.

AP CAPSTONE

AP Capstone is an innovative diploma program from the College Board that equips students with the independent research, collaborative teamwork, and communication skills that are increasingly valued by colleges. AP Capstone is built on the foundation of two AP courses – AP Seminar and AP Research – and is designed to complement and enhance the in-depth, discipline-specific study experienced in other AP courses. The two classes are taken separately, with Seminar being a prerequisite for Research. Students who earn scores of 3 or higher in AP Seminar and AP Research and on four additional AP Exams of their choosing receive the AP Capstone Diploma™. Students who earn scores of 3 or higher in AP Seminar and AP Research but not on four additional AP Exams receive the AP Seminar and Research Certificates.

GIFTED PROGRAM

Gifted programming at Solanco High School has been built around the aspects of the Autonomous Learner Model (Betts and Kercher) and is designed to give gifted students the skills to take charge of their own learning. Below is how each aspect of the Autonomous Learner Model has been implemented at Solanco High School:

Orientation: Each gifted student at Solanco is placed within a gifted advisory, ensuring opportunities to interact with their intellectual peers. Team building and socialization activities occur during specialized *Solanco Seminars*, weekly advisory lessons, and lunch groups.

Individual Development: Gifted students can enroll in a *Gifted Independent Study*, attend *Secondary Enrichment Experiences (SEE)* at IU13, and develop specialized skills in conjunction with individual teachers and the guidance office.

Enrichment: Through *Solanco Seminars*, advisory lessons, and collaboration with individual teachers and departments, gifted students are provided various forms of enrichment focused on strength areas and career interests.

Seminars: Focused and topical learning occurs through *Solanco Seminars*, *SEE Seminars*, and specialized gifted courses.

In-depth Study: Specially designed instruction, including gifted courses and academic competitions provide opportunities for thorough study and application of skills. Academic competitions include Odyssey of the Mind, Model UN, Mock Trial, PA Governor's STEM competition, and various quiz bowl-style events.

*These are graded courses offered exclusively to gifted students at Solanco High School:

- *Gifted Applications A & B:* Gifted Applications is an elective class centered around high-level competitions that occur at local, regional, and national levels. Preparation, practice, and ultimately competitions serve as units of study. The purpose of this class is to intellectually challenge gifted students while enhancing real world skills through project- and inquiry-based learning. Additionally, secondary skills such as teamwork, time management, and risk-taking are developed. Competitions include Odyssey of the Mind, the Stock Market Game, Model UN, and Mock Trial. Course # 60999 & 60277 – Full Year – 1.0 credits
- *Gifted Explorations A & B:* The Gifted Explorations course is an elective enrichment course designed to allow gifted students to explore fields of study not offered elsewhere during their high school career. Units have included the study and creation of film, sports, 20th century music, and animation. Assessment is often done through writing, although every unit contains a large creative project. Course # 90740 – Semester 1 (Fall) / 90741 – Semester 2 (Spring) – each is 0.50 credits.
- *Gifted Independent Study (GIS):* A student enrolling in a GIS is expected to generate a project idea that they will implement with the help of a faculty mentor. Upon completing the project, students will present their results in a formal setting to a grading committee, who will assess and assign a letter grade. Since there are very few deadlines, time management is an important skill that will be developed/improved through the *GIS* process. Past projects have included the creation and performance of original music, architectural design, a political internship, and research papers, among others. Course # 90712 – Full Year – 1.00 credits
- Grading for Gifted Independent Study is the same as any general education independent study. (See page 8 for description.)

GRADING

Grades are based upon assessments, in class participation and out-of-class work, as determined by the individual classroom teacher. The basic guideline for grades is as follows:

A:	Outstanding	4.0
B:	Above expectations	3.0
C:	Meets expectations	2.0
D:	Below expectations	1.0
F:	Failure to achieve minimal course requirements. No credit earned 0.0	
I:	Incomplete. An "I" is never assigned as a final grade. Incomplete work due to an excused absence must be made up within ten (10) school days after the conclusion of each quarterly marking period. If the work is not made-up, the student will receive an "F" grade.	

HIGH SCHOOL GRADUATION

To be a graduate of Solanco High School, a student must successfully complete the graduation requirements approved by the Solanco Board of School Directors.

A student must earn a minimum of 26.0 credits which includes the following:

<u>Units of Credit</u>	<u>Course Title</u>
4.0	English
3.0	Mathematics
3.0	Science
3.0	Social Studies
2.0	Arts and Humanities
1.5	Fitness
.5	Wellness
8.0	Electives
<u>1.0</u>	an additional credit in English, math, science or social studies at the student's choice
26.0	

Courses that may be selected to meet the Arts and Humanities (2.0 credits) requirement may be chosen from the electives in these departments:

Agriculture	World Language
Art	Music
Business	Social Studies
English	Technology Education
Family and Consumer Science	

Credit Requirement

- 5.00 credits to advance to 10th grade
- 12.00 credits to advance to 11th grade
- 19.00 credits to advance to 12th grade

HONOR ROLL

The high school program of reporting pupil progress recognizes high scholastic achievement through an honor roll system.

Distinguished Honors: Students who receive a 3.5 quarterly grade point average. No grades below a "B".

Honors: Students who receive a 3.0 quarterly grade point average. No grades below a "C".

MAKE-UP COURSES

Students who fail a course may earn credits by successfully completing an approved Credit Recovery and/or summer school program. The building principal and counselor must approve taking the remedial course. Students are urged to make-up credits by using Solanco summer school or Credit Recovery but they may enroll in any certified summer school program.

The Make-up Course subject will be recorded on the transcript as a pass/fail course, and the earned credit will appear on the transcript.

Students may not use summer school, tutorial programs or other credit recovery to advance their credits toward graduation.

RETAKEING ACADEMIC COURSES

Students may repeat a previously passed course in cases where they feel they have not adequately mastered the subject material. When a subject is repeated, the grades from both courses will appear on the transcript. The second time that a subject is taken, no additional credit will be awarded. The grade will not be calculated as part of the GPA and rank. The course will be repeated only with the approval of the Lead Teacher, school counselor, and the principal.

The world language department recommends that students who have earned a "D" in their world language course should repeat the course the next year for a stronger foundation before advancing to the next level.

SCHEDULE CHANGES DURING THE SCHOOL YEAR

A student's request for a course change must be made for sound academic reasons and have the approval of the counselor or by direction of the administration. Counselors will change schedules to correct a scheduling error, to schedule a failed or required course, or to balance the class size. **Any courses dropped by the student after the third week of the semester will receive a final grade of "F" for the year.**

SECTION II – SENIOR OPTIONS

EARLY COMPLETION PROGRAM

This option is offered to senior class members who would complete all graduation requirements by the end of the first semester of his/her senior year. The following procedures will be followed:

- The student must apply for this option in his/her junior year at the time of course selection.
- A written plan of action must be submitted to the school counselor and the principal.

- By the end of the junior year a meeting will be held to discuss the option and the plan. The meeting will be with the student, parents, school counselor and the principal.
- By November of the senior year proof of the plan must be submitted and approved by the school counselor and the principal.
- The student must demonstrate proficiency as documented by scores on Keystone Exams in Algebra, Literature, and Biology or satisfactorily complete required remediation.
- The student must receive a passing grade in each subject for the first semester of senior year.
- The discipline and attendance record of the student will be reviewed by the administration. If it is determined that the student has not demonstrated good attendance and discipline the request for this option will be denied.

A student who earns the right to exercise this option will be considered a member of the senior class for the second semester but will not attend classes. The student retains the right to participate in senior events like the prom, Baccalaureate and graduation. The student relinquishes his/her opportunity to be the Salutatorian or Valedictorian of the graduating class.

DUAL ENROLLMENT PROGRAM (FALL AND/OR SPRING SEMESTER COURSES ONLY)

Dual Enrollment is a program that allows students to earn both college and high school credits. Solanco partners with Millersville University, HACC, Lancaster Bible, Thaddeus Stevens Tech, Cecil College and PA College of Health Sciences.

Student eligibility: The student will demonstrate readiness for college level work in the interested area of study as determined by the college. A minimum 3.00 GPA at Solanco is required to initially apply for the program. The program requires a minimum of a 2.000 GPA at Solanco. The college will determine readiness based on school counselor/principal recommendation, available standardized test scores (PSSA, PSAT, SAT), general academic performance, and/or a student interview with the admissions office of the college. The college and/or technical school may require placement tests to be completed. This is a requirement of the individual school that must be met for admission.

The course will appear on the high school transcript and will receive high school credit. The course will be included in GPA and rank calculations. Core area courses will carry the weight of an AP course. Elective area courses will not be weighted. Earned college credit through this program is accepted at the discretion of the receiving college. A 3.0 credit college course is equal to 1.0 Solanco credit.

INDEPENDENT STUDY

Listed below are the criteria for independent study:

- Seniors only.
- Must have advanced through the courses in that subject area.
- **Must submit the request, in writing**, to the counselor with the written approval of the teacher.
- A written **Project Design** must be submitted to the principal. Approval of the design must be received from the teacher and counselor prior to being submitted to the principal.
- All requests and Project Designs must be submitted and approved by the principal.
- All grades for independent study are pass/fail. Those grades will not be used to calculate class rank, GPA, or honor roll.

INTERNSHIPS

The Career Internship Program is intended to provide Solanco High School seniors with opportunities to participate in on-site observations of business and professional organizations. This program will provide students with the opportunity to interact with, observe, and assist individuals who are employed in a profession. The intent of the internship is to provide activities that will enable the student to make informed career decisions based on significant knowledge and insights developed during participation.

Criteria:

- Internships are open only to seniors.
- The student is responsible for initiating and securing a career internship experience.
- Seniors applying for an internship must demonstrate the following:
 - a 90% attendance record over three years
 - a minimum G.P.A. of 2.00 over three years
 - a good disciplinary record
- Students may not be paid for their internship experience.
- Students will spend a minimum of five hours each week participating in the internship experience.
- Students will schedule the career internship option during the course selection process. Specific details will be arranged with the counselor and principal.
- A pass/fail grade will be awarded for the Career Internship Experience and one (1) credit will be noted on the transcript. Class rank and G.P.A. will not be affected by the internship.
- Internship will be for one (1) semester.
- Agriculture internships will be approved through the agriculture department. Students must be enrolled in the high school agriculture curriculum.
- Students who fail to maintain an acceptable level of performance on the internship based upon attendance, grades and the appraisal by the internship supervisor will receive a "F" grade and will immediately be returned to a full time class schedule. The student must pass all courses in order to graduate.
- Students may not have an immediate family member as a direct supervisor.

SENIOR WORK PROGRAM

Seniors are offered the opportunity for a partial day Work Study Program. The requirements for this program are:

- The senior must be on track to graduate with all credit requirements being satisfied at the end of the second semester.
- Achieved a 90% attendance rate for the previous three years and maintains this attendance rate while in the program.
- Has documented that he/she has employment.
- Any action resulting in out-of-school suspension may be reason for removal from the program.
- Will satisfy requirements in reading and math as required by the Pennsylvania Department of Education.

Schedule of the program:

- The participants will attend the high school for a partial day and then be dismissed to go to the place of employment.
- In some cases a student could attend classes in the afternoon and work in the morning.

Responsibility for the program:

- Students are responsible for acquiring employment.
- Students must complete necessary forms including signatures of parent and employer.
- If the student loses the employment due to his/her fault then the student will return immediately to a full schedule at the high school. The student must successfully pass all subjects in order to graduate.
- The student is responsible for maintaining passing grades in all classes. Students with any failing grades may be pulled from the program in order to remain in school to focus upon work needed to achieve and maintain passing grades.

PIAA ELIGIBILITY

According to PIAA regulations, student-athletes must be passing a minimum of 4 credits in order to be eligible for competition. This regulation could affect seniors who are scheduling internships and work-study experiences. The Solanco high school procedure requiring students to have passing grades in all but one class to be eligible are still in effect. The PIAA regulation simply sets a minimum number of classes for a student to be taking. A student taking 4 credits must be passing all classes. A student taking 5+ credits must be passing all but one class.

SECTION III – NCAA ELIGIBILITY CENTER FOR ACADEMIC ELIGIBILITY NCAA.org

Division I Academic Eligibility Requirements

If you enroll in a Division I college and want to participate in athletics or receive an athletic scholarship, you must meet the following academic standards:

- Graduate from high school;
- Complete the 16 core courses listed below;
- Present a minimum required grade-point average in your core courses; and
- Achieve a combined SAT or ACT sum score that matches your core-course grade-point average in the grade point average and test score index

16 Required Core Courses:

- Four years of English;
- Three years of mathematics (algebra I or higher level);
- Two years of natural or physical science (including one year of lab science if offered by your high school);
- One extra year of English, mathematics or natural/physical science;
- Two years of social science; and
- Four years of extra courses (from any category above, or foreign language, non-doctrinal religion or philosophy)

-A "partial qualifier" is eligible to practice with a team at its home facility and receive an athletic scholarship during his or her first year at a Division I school and then has three seasons of competition remaining.

-A partial qualifier may earn a fourth year of competition, provided that at the beginning of the fifth academic year following the student-athlete's initial, full-time collegiate enrollment, the student-athlete has received a baccalaureate degree.

-In order to be considered a "partial qualifier," you have not met the requirements for a qualifier but you are required to:

- Graduate from high school;
- Present a grade-point average (based on a maximum of 4.00) and a combined score on the SAT verbal and math sections or a sum score on the ACT.

Division II

If you enroll in a Division II college and want to participate in athletics or receive an athletics scholarship, you must meet the following academic standards:

- Graduate from high school;
- Complete the 14 core courses listed below;
- Present a 2.000 grade-point average in your core courses; and
- Achieve a combined SAT score of 820 or a sum score of 68 on the ACT.

16 Required Core Courses:

- Three years of English;
- Two years of mathematics (algebra I or higher level);
- Two years of natural or physical science (including one year of lab science if offered by your high school);
- Three years of English, mathematics or natural/physical science;
- Two years of social science; and
- Four years of extra courses (from any category above, or foreign language, non-doctrinal religion or philosophy)

-A "partial qualifier" is eligible to practice with a team at its home facility and receive an athletic scholarship during his or her first year at a Division II school.

-In order to be considered a "partial qualifier" you have not meet the requirements for a qualifier, but you are required to graduate from high school and meeting one of the following requirements:

- Specified minimum SAT or ACT score; or
- Successful completion of a required core curriculum consisting of a minimum number of courses and a specified minimum grade-point average in the core curriculum.

-Details of these general requirements are contained in the following sections.

Definition of a Core Course

To meet the core-course requirement, a "core course" is defined as a recognized academic course (as opposed to a vocational or personal-service course) that offers fundamental instruction in a specific area of study. Courses taught below your high school's regular academic instructional level (e.g. remedial, special education or compensatory) can't be considered core courses regardless of the content of the courses.

Additional information

Several additional points about the NCAA's initial eligibility requirements should be emphasized:

- These requirements currently do not apply to Division III colleges, where eligibility for financial aid, practice and competition is governed by institutional conference and other NCAA regulations.
- This rule sets a minimum standard only for athletic eligibility. It's not a guide to your qualifications for admission to college. Under NCAA rules, your admission is governed by the entrance requirements of each member school.

For registration information, visit the NCAA Eligibility Center website at <https://web1.ncaa.org/eligibilitycenter/common/> or contact NCAA Eligibility Center at the address and phone listed below:

NCAA Eligibility Center
P.O. Box 7136
Indianapolis, IN 46207-7136

(877) 262-1492
Call Center Hours: 8a.m. - 6p.m. EST Monday-Friday

understanding career pathways®

An Introduction

Lancaster County's 16 school districts have adopted a common career preparation program called Career Pathways, which is based on the PA State Academic Standards for Career Education and Work. These standards identify the necessary academics and technical requirements for careers of the 21st Century. The Career Pathways model is designed to help students and parents plan for careers using four main categories of careers/jobs called "Pathways," which are based on national employment trends. These trends are often referred to as "career clusters."

The goal of Career Pathways is for all students to develop a vital and meaningful education and career plan beyond High School graduation and to have a seamless transition to college and career success. This plan may include work based training, skill certification, military, associate's, bachelor's or graduate degree.

What are Career Pathways

Think of the icons below as 4 different roads. Each one will bring you a variety of career possibilities that relate to that particular category. By choosing a specific Pathway below, you can take advantage of all the opportunities that best fit your interests, abilities and experiences. This decision not only accelerates the process of developing your career path, but it also prepares you for any number of jobs within that specific Pathway. And remember: If you don't like the Pathway you have chosen, you can change it!



ARTS & COMMUNICATIONS



BUSINESS, FINANCE and
INFORMATION TECHNOLOGY



ENGINEERING & INDUSTRIAL TECHNOLOGY



SCIENCE & HEALTH

How do I use them?

Finding the right career can be as simple as this 3 STEP PROCESS below:



career  pathways



arts & communications

Pathway Overview

Careers in this Pathway are related to the visual and performing arts and design, journalism and broadcasting, audio and video technology, printing technology, telecommunications.

PA Dept. of Education Career Clusters: Arts, Audio-Visual Technology Communications

The US Department of Education has designated 16 clusters of careers that form the basis for Career Pathway systems in Pennsylvania. Each cluster represents a group of related industries and occupations in the American economy.

what you'll need		
interests	skills	experiences
English language fine arts communications & media computer & electronics music social sciences foreign languages	idea generation writing originality/creativity influencing others speech clarity working independently deductive reasoning	art/music/dance writing acting/entertaining others directing/conducting design/fashion broadcasting/public speaking computers/graphic technology
where you'll go		
entry level	skilled/technical	professional
Acting Career Public opinion researcher Videographer Desktop Publisher *Mechanical Draftsperson *Camera Operators: TV, Video Retail Salesperson Press Operators	Artist in Residence Music and Marketing Fabric/Textile Designer Photographer Printing Technology *Barber *Advertising Sales Agents *Interpreters & Translators	Art Historian Economics *Graphic Designers Web Designer Writer Prepress Technician Industrial Packaging Designer Studio Musician

career pathways

* Represents a 2017 High Priority Occupation for Lancaster County Workforce Investment Area.



business, finance & information technology

Pathway Overview

Careers in this Pathway are related to the business environment and include entrepreneurial careers, sales, marketing, computer and information systems, finance, accounting, human resources, economics, and business management.

PA Dept. of Education Career Clusters:
Business, Management & Administration; Finance; Information Technology; Marketing, Sales and Service

The U.S. Department of Education has designated 16 clusters of careers that form the basis for Career Pathway systems in Pennsylvania. Each cluster represents a group of related industries and occupations in the American economy.

what you'll need		
interests	skills	experiences
business environment office management computers & technology buying & merchandising record keeping owning your own business sales/persuading others designing systems leadership and authority Making a profit	influence others electronic information manage people & projects give speeches & presentations debate ideas explain electronic operations generate computer designs keep records collect & manage data use computers & technology	communicate effectively organize a project working with technology investing e-commerce & sales owning a business presentations to a group buying & merchandising hospitality & tourism work with the public
where you'll go		
entry level	skilled/technical	professional
*Advertising Sales Agents *Accounts Payable/Receivable *Claims Adjusters Auto Sales Bank Clerk/Teller Entrepreneur Management Trainee Military supply *Payroll Clerk Receptionist *Truck Drivers Retail Sales	Accounting clerk *Administrative Assistant Buyer Corporate Trainer Entrepreneur Marketing researcher Merchandising Manager Purchasing Manager *Real Estate Agent Tax Planner Wholesale Sales *Sales Representatives	Accountant/Controller Actuary *Chief Executive Officer Auditor Consultant Economist Entrepreneur *Financial Planner *Sales Manager Operations Manager Stockbroker Underwriter

* Represents a 2017 High Priority Occupation for Lancaster County Workforce Investment Area.

Career pathways



engineering, & industrial technology

Pathway Overview

Careers in this Pathway are related to the technologies necessary to design, develop, install and maintain physical systems; agriculture, the environment and natural resources; scientific research and development services; and planning, management, and movement of people, materials and goods from one point to another.

PA Dept. of Education Career Clusters:

Agriculture, Food & Natural Resources; Architecture & Construction; Manufacturing; Science, Technology, Engineering & Mathematics; Transportation, Distribution and Logistics

The US Department of Education has designated 16 clusters of careers that form the basis for Career Pathway systems in Pennsylvania. Each cluster represents a group of related industries and occupations in the American economy.

what you'll need		
interests	skills	experiences
<ul style="list-style-type: none"> applied math building with your hands working on a team working in a laboratory setting working with electronics operating machinery & tools designing models & prototypes geography producing tangible result 	<ul style="list-style-type: none"> design & create products design/repair engines improve things to work better think in a logical sequence visualize three dimensionally design buildings follow a schematic design follow instructions precisely 	<ul style="list-style-type: none"> computer & electronics operating vehicles building & construction farming mechanical design model building problem solving assemble & repair items working outdoors
where you'll go		
entry level	skilled/technical	professional
<ul style="list-style-type: none"> Apprenticeship Body Repair *Machinist Automotive Detailer *Construction Laborer Highway Maintenance Packer/Packager *Painter Rail Worker Repair Technician 	<ul style="list-style-type: none"> Automotive Technology Aviation Maintenance Technology Building Construction Technology *Electro-Mechanical Technicians Nanofabrication Manufacturing Home and Building Remodeling Collision Repair Technology Environmental Specialist Surveying Metals Fabrication *Architecture and Civil Drafters 	<ul style="list-style-type: none"> Aerospace Agriculture Sciences Agronomy Animal Science *Environmental Engineering Civil Engineering Horticulture *Industrial Engineering Mathematics Physics *Biochemists and Biophysicists

* Represents a 2017 High Priority Occupation for Lancaster County Workforce Investment Area.



science & health

Pathway Overview

Careers in this Pathway are related to the promotion of health and treatment of disease and disorders; economic, political, and social systems; and teaching and training children and adults the information and skills needed to ensure a productive career and life.

PA Dept. of Education Career Clusters:
Education & Training; Health Science; Hospitality & Tourism;
Human Services, Law, Public Safety & Security; Government & Public Administration

The US Department of Education has designated 16 clusters of careers that form the basis for Career Pathway systems in Pennsylvania. Each cluster represents a group of related industries and occupations in the American economy.

what you'll need		
interests	skills	experiences
caring for people or animals science and medicine helping others observing & recording facts researching information working on a team family and Social Services teaching others law	oral expression active listening speech clarity leadership social perceptiveness fluency of ideas inductive & deductive reasoning manual dexterity follow instructions precisely analyze collected data	volunteer work manage finances prioritize obligations pay attention to details remain fair and just relate to different people make learning fun for others cut & style hair organize travel plans
Where you'll go		
entry level	skilled/technical	professional
*Health Care Support Workers Camp Counselor Custodian Food Service Worker *Medical Transcriptionist Library Aide Model Public Radio Dispatcher Security Guard Teacher Aide	*Biotechnology Cardiovascular Technology Child Development Culinary Arts Dental Hygiene Medical Assisting *Medical Laboratory Technician *Veterinary Technologists *Child Care Worker Surgical Technology Legal Secretary	*Secondary Education Hospitality/Management Medical Technologist Pre-Medicine Pre-Dentistry Pre-Pharmacy *Registered Nursing *Social Work Public Relations *Lawyer

*Represents a 2017 High Priority Occupation for Lancaster County Workforce Investment Area.

career pathways

what's hot here at home.

Check out the top 40 jobs in Lancaster County

Career awareness and exploration include an understanding of changing job markets. Although you may not choose a high priority occupation, labor market data is an important part of career planning as you decide where to invest your time, effort, and money. Perhaps your interests, skills and experiences will lead you to one of the 40 hot jobs in Lancaster County.

(List compiled by the Workforce Investment Board of Lancaster County.)



<p><i>Students interested in Arts & Communication will find many avenues for their talents and interests in the workplace. Although there are currently no "hot jobs" in Lancaster County in this Pathway, the job market is always changing. Students interested in the arts may discover that their skills are valuable and applicable to careers in other Pathways. Students should never let job market trends be their only consideration when choosing a career!</i></p>	<p>arts & communication</p>
<ul style="list-style-type: none"> Sales representatives, wholesale and manufacturing, except technical and scientific products Accountants and auditors Executive secretaries and administrative assistants Bookkeeping, accounting, and auditing clerks Secretaries, except legal, medical, and executive Sales representatives, wholesale and manufacturing, technical and scientific products Computer support specialists Truck drivers, heavy and tractor-trailer 	<p>business & finance</p>
<ul style="list-style-type: none"> Carpenters Printing machine operators Industrial machinery mechanics Packaging and filling machine operators and tenders Machinists Welders, cutters, solderers, and brazers Brickmasons and blockmasons Sheet metal workers Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic Industrial engineers Operating engineers and other construction equipment operators Painters, construction and maintenance Bus and truck mechanics and diesel engine specialists Team assemblers Industrial truck and tractor operators Truck drivers, light or delivery services Electricians Maintenance and repair workers, general First-line supervisors/managers of production and operating workers Plumbers, pipefitters, and steamfitters Heating, air conditioning, and refrigeration mechanics and installers 	<p>engineering & technology</p>
<ul style="list-style-type: none"> Registered nurses Elementary school teachers, except special education Police and sheriff's patrol officers Dental assistants Physical therapists Pharmacists Medical and clinical laboratory technicians Licensed practical and licensed vocational nurses Food batchmakers Medical records and health information technicians Radiologic technologists and technicians 	<p>health & social services</p>

SMARTFUTURES

Solanco School District is utilizing the Smart Futures program to provide students with **Career Exploration and Future Ready Activities K-12**. Smart Futures is a web-based program that is customized by grade level. The district's goal is to utilize Smart Futures as one more resource for helping students plan for their future.

- ☑ EXPLORATION
- ☑ PLANNING
- ☑ BADGING
- ☑ CREDENTIALING
- ☑ EMENTORING

Our Future Ready Process

Who am I?



Surveys, activities and skill building tools provide self awareness needed to identify realistic career goals.

Where am I going?



Explore careers and clusters that match you and your goals. Get guidance from an eMentor.

How do I get there?



Find relevant programs and majors and identify schools and colleges offering the best return on your investment.

Images from: www.smartfutures.org

SECTION IV – COURSE DESCRIPTIONS

Agricultural Sciences & Technology Career Pathways: Engineering, Science and Technology

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0001	Hand/Power Tool Technology	1.00	9-10

Students will experience the proper use and maintenance of hand and power wood and metal working tools. Hands-on instruction includes the construction of various useful projects. Students will complete a boot jack, tool boxes, foot stool, feed scoop, and additional other projects. This course will include technical as well as practical instruction. Students are required to participate in an online OSHA Safety Certification as the major grade for the 3rd marking period of the year. This course is a prerequisite to take Building Construction Technology the student's junior or senior year.

0002	Elements of Agri-Science	1.00	9-10
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This course is designed to give students a basic overview of agri-science. Some areas covered include introductions to plant and animal science, soil science, wildlife, forestry, horticulture, food science, international agriculture and technology. Hands-on activities and FFA contests will accompany most units. Career planning and SAE project development will be integrated into the course. It is strongly recommended that all first year FFA members take this course in order to be successful on their SAE.

0003	Power/Machine Technology	1.00	10
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Students will be trained in the service and repair of 4 cycle engines which will include disassembly, inspection, overhaul, and reassembly. Additionally, tune-up and minor adjustments of multi-cylinder engines and systems will be covered. This course will balance classroom instruction with practical application of theories and concepts in the laboratory. Students will be expected to provide their own used engine (preferably Briggs and Stratton) for this course. Engine criteria can be obtained in advance by contacting Mr. Kalupson (carey_kalupson@solancosd.org) at any time after course selection process or over the summer. Students are financially responsible for the purchase of any replacement parts required to return their engine to service.

0004	Animal Science	1.00	10
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This course includes the selection, nutrition, reproduction, management practices, housing, marketing, and environmental concerns of dairy, beef, swine, sheep, poultry, and horses. Project development will be integrated into the course. Some of the hands-on activities will include handling animals and food labs. Also, meat judging and dairy food judging will be included.

0005	Small Animal Care and Management	0.50	10-12
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This course will include the care and management of small animals. The study of pets, laboratory animals, and aquatic animals will be included. Areas of study will include feeding and nutrition, reproduction, selection, and animal health. Labs will complement the course. The handling of live animals is a graded requirement for this class.

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0008	Equine Science (Horsemanship)	0.50	10-12

This course will include breeds, management, and care of pleasure horses. Additional areas will include functional anatomy, digestion and nutrition, tack use and identification, techniques of horsemanship and methods used in selection and evaluation.

0017	Natural Resources	0.50	10-12
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This course will include the study of management of our renewable natural resources. Instruction will include water and air quality, soil conservation, land surveying, and land use planning. Some hands-on activities will include water and air quality testing, site surveying, and the development of a land use plan. This class is designed as a follow-up to *Wildlife & Forestry*, and assumes that students have a background in animal and plant identification.

0019	Horticulture	0.50	10-12
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This course will include the study of ornamentals, small fruit and vegetable production, greenhouse crops, and basic floral design. Some activities will include care of the rose garden, development of additional outdoor demonstration areas, and live and dried floral arrangements.

0020	Wildlife and Forestry Management	0.50	10-12
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This course will include the study of our renewable wildlife and forestry resources. Instruction will include forestry and woodlot management, fish and wildlife management, and recreational parks management. Some hands-on activities will include wildlife habitat improvement, construction of wildlife structures, wildlife population studies, timber stand improvement, and recreational parks management.

0026	Crop Science	0.50	10-12
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This course will include the care and management of agricultural crops. Selection, cultural techniques, environmental concerns, processing, storage, and marketing of agricultural crops as well as integrated pest management will be included. Some hands-on activities will include crop yield checks, germination testing, fertilization trials, and acreage measurement. (Formerly "Plant Science").

0027	Land Use & Management	0.50	10-12
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Students will learn about the importance, development, and properties of soils. Additional topics will include land use and management, soil fertility, fertilizers, and soil conservation. Labs and hands-on instruction will be incorporated into the course. (Formerly "Soil Science").

0028	Agri-Business Operations	0.50	10-12
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Basic principles of operating an agribusiness will be taught. Students will acquire marketing, budgeting, investment analysis, cash flow and decision making techniques. Some hands-on activities will include development and marketing of a product, interview, resume writing skills, and international agricultural activities.

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0006	Basic Arc & Gas Welding	0.50	11-12

Students will learn basic skills in electric arc, oxyacetylene, and MIG methods of welding and cutting. Students will construct a useful project using the skills taught as their final exam grade. The district will provide all other safety attire and equipment. There is no final exam exemption process available for this course. This course will include technical as well as practical instruction.

0007	Building Construction	0.50	11-12
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Students will be taught principles of design, layout, and construction of various types of buildings. Hands-on instruction will cover all aspects of construction from foundation to roof including building layout, concrete and masonry foundations, framing techniques, and roofing methods and materials. This course will include technical as well as practical instruction. The first marking period of the semester involves a construction math unit that requires a basic 4-function calculator. The second marking period will be devoted to the construction of small-scale required projects or perhaps a back yard shed for a student's family or for a community member. The cost of materials would be the responsibility of the party receiving the completed shed. Students MUST have taken and successfully passed any of the following courses to be eligible for this class: Hand and Power Tool Technology, Manufacturing systems I and II, Wood Systems, or Advanced Wood Systems.

0009	Advanced Animal Science I – Fall	0.50	11-12
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This course will include the study of veterinary science and its application of basic animal health principles and practices. Advanced Animal Science I will include the study of the place of animals and animal science in the lives of humans and the biological science of animal science. Labs will complement areas of instruction. Note: Students only taking Advanced Animal Science I will not be able to earn college credit for the course. To qualify for earning college credits, students must take both advanced courses and successfully pass a comprehensive exam at the end of the year.

0010	Advanced Animal Science II – Spring	0.50	11-12
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This course complements Advanced Animal Science I. Specific areas of study will include the animal industries and animals in society. Specific study of large and small animals will be included. Selected veterinary skill will be addressed. Labs will compliment areas of instruction. Note: This course is intended for students interested in either 2 or 4 years of agricultural study after high school. This course will meet the graduation project requirement Students only taking Advanced Animal Science II will not be able to earn college credit for the course. To qualify for earning college credit, students must take both advanced courses and successfully pass a comprehensive exam at the end of the year.

0011	Advanced Plant Science I – Fall	0.50	11-12
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This course will include the applied and advanced study of crops, plant growth, hybridization and plant breeding. Labs will complement areas of instruction. Note: This course is intended for students interested in either 2 or 4 years of agricultural study after high school. Students only taking Advanced Plant Science I will not be able to earn college credit for the course. To qualify for earning college credit, students must take both advanced courses and successfully pass a comprehensive exam at the end of the year.

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0012	Advanced Plant Science II – Spring	0.50	11-12

This course will include the applied and advanced study of soils, entomology, plant pathology, tissue culture, and plant nutrients. Labs will complement areas of instruction. Note: This course is intended for students interested in either 2 or 4 years of agricultural study after high school. Students only taking Advanced Plant Science II will not be able to earn college credit for the course. To qualify for earning college credit, students must take both advanced courses and successfully pass a comprehensive exam at the end of the year.

0018	Landscape Design	0.50	11-12
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This course will include the design, plant selection, installation, maintenance, and use of plants in the landscape, lawn and turf grass establishment and maintenance will also be included. Some activities will include design of an outdoor landscape, maintenance of existing landscapes, plus selecting and installation of selected plants in a landscape.

0023	Basic Wiring & Electricity	0.50	11-12
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Students will learn and demonstrate skills in planning and installing residential electrical systems, including selection and installation of electric motors and controls. This course will include technical as well as practical instruction.

0029	Leadership Lab	0.50	11-12
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Many of the activities/topics included in all the Agricultural Education courses will be expanded upon in this course through Career Development Events/practicum participation. Enrollment is recommended for all FFA officers and members interested in having a leadership role in the FFA.

0022	Supervised Agricultural Experience	0.50	9-12
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This course is for the purpose of starting, maintaining, and completing an approved Supervised Agricultural Experience project(s). **This course will meet by appointment throughout the year.** FFA members will automatically be enrolled in this course as per the National FFA Constitution and By-Laws.

Art
Career Pathway: Visual Arts Design and Communication

Full Year Courses Grades 9-10

Design I 0049 1.00 credit
Design II 0079 1.00 credit (*prerequisite: Design I*)
Drawing 0038 1.00 credit (*prerequisite: Design I*)
Photography I 0033 1.00 credit
Photography II 0080 1.00 credit (*prerequisite: Photography I*)
Ceramics I 0031 1.00 credit
Ceramics II 0035 1.00 credit (*prerequisite: Ceramics I*)

Semester Courses Grades 11-12

Design I 0077 0.50 credit
Design II 0078 0.50 credit (*prerequisite: Design I*)
Drawing 0092 0.50 credit (*prerequisite: Design I*)
Painting 0024 0.50 credit (*prerequisite: Drawing*)
Photography Level I 0081 0.50 credit
Photography Level II 0082 0.50 credit (*prerequisite: Photography Level I*)
Ceramics I 0042 0.50 credit
Ceramics II 0043 0.50 credit (*prerequisite: Ceramics I*)
Ceramics III 0083 0.50 credit (*prerequisite: Ceramics II*)
Ceramics IV 0084 0.50 credit (*prerequisite: Ceramics III, approval of instructor*)
Sculpture 0048 0.50 credit (*prerequisite: Ceramics I*)
Portfolio I 0094 0.50 credit* (*prerequisites: see all prerequisites listed in description below*)
Portfolio II 0093 0.50 credit* (*prerequisites: see all prerequisites listed in description below*)

*Note: Advanced Portfolio I and Portfolio II candidates (see descriptions below) are advised to schedule courses in the following sequence:

Grade 9:

Design I 0049 1.00 credit*
Drawing 0038 1.00 credit** (*Prerequisite: recommendation of Grade 8 Art teacher*)

Grade 9-10:

Ceramics I 0031 1.00 credit**
Photography I 0033 1.00 credit*

Grade 10

Design I 0049 1.00 credit* (*if not completed in Grade 9*)
Drawing 0038 1.00 credit** (*if not completed in Grade 9*)
Photography I 0033 1.00 credit* (*if not completed in Grade 9*)
Design II 0079 1.00 credit* (*prerequisite: Design I*)
Ceramics II 0035 1.00 credit* (*prerequisite: Ceramics I*)

Grade 11

Painting 0039 0.50 credit* (*prerequisite: Drawing*)
Sculpture 0048 0.50 credit** (*prerequisite: Ceramics I*)
Portfolio I 0094 .05 credit** (*prerequisites: see all prerequisites listed in description below*)

Grade 12

Portfolio II 0093 .05 credit** (*prerequisites: see all prerequisites listed in description below*)

**Required Course *Recommended Course

Art

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0049	Design I	1.00	9-10

Design I is an introductory level full year course for beginning art students to explore the fundamentals of design in two-dimensional and three-dimensional media. The course teaches the elements of art and principles of design as used in historical and contemporary art works. Personal expression is encouraged as students use a variety of two-dimensional and three-dimensional visual arts media and processes. Sketchbooks are a significant part of the course for the development of basic drawing skills and the planning of visual art assignments. Frequent class critiques offer students the opportunity to participate in a dialogue that will help them to develop the vocabulary and visualization skills necessary for critical evaluation.

0079	Design II	1.00	10
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Design II is a full year course that further develops student knowledge and skills in two-dimensional and three-dimensional media. The course extends the study of the elements of art and principles of design as used in historical and contemporary art works. Student work incorporates more advanced use of a variety of two-dimensional and three-dimensional visual arts media and processes. Sketchbooks will continue to be essential for the increased development of drawing skills and artistic ideas. Frequent class critiques offer students the opportunity to participate in a dialogue that will help them to develop the vocabulary and visualization skills necessary for critical evaluation. **Prerequisite: Design I**

0038	Drawing	1.00	9-10
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Drawing is a full-year course that will sharpen student visual perception and the ability to draw from direct observation. Investigation of drawing techniques, media, and aesthetics structured upon a solid understanding of the elements and principles of design will guide direct observational drawing that incorporates various genres including: still-life, portrait and figure studies, landscape, and architectural interiors/exterior. Line, shape, value, color, texture, space, perspective, and compositional unity in terms of balance, repetition, variety, emphasis, contrast, and proportion will be explored through direct observation utilizing a variety of traditional and contemporary media. Students will employ accuracy and expression as they progress to an increasingly sophisticated level of fluency in drawing and thematic development. Traditional and contemporary styles and trends in drawing will be explored through visual presentation and research to provide diverse visual references to inform student work. Frequent class critiques offer students the opportunity to participate in a dialogue that will help them to develop the vocabulary and perceptual skills necessary for in-depth critical evaluation. **Prerequisite: Design I grade 9 students need the recommendation of the grade 8 art teacher.**

0033	Photography I	1.00	9-10
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Photography I is a full year introductory course in black and white film photography. Students will explore basic photographic skills including camera controls, negative exposure and development, exposing and developing contact prints and enlargements, and presentation. Students will investigate the elements of line, shape, texture, light, motion, and perspective in

terms of their relationship to structure, balance, and dynamics—the essential components of excellent composition. Students are presented with an overview of the history of photography through slide presentations to provide numerous and diverse visual references to inform the development of student work. Frequent class critiques offer students an opportunity to participate in a dialogue that will help them to develop the vocabulary and visualization skills necessary for critical evaluation of photographic work. **Students must provide their own 35mm manual SLR camera.**

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0080	Photography II	1.00	10

Photography II is a full year course that extends the investigation of black-and-white film photography introduced in Photography I. Students will explore and refine photographic skills including camera controls, negative exposure and development, exposing and developing contact prints and enlargements, and presentation. Students will engage in creative investigation of alternative techniques, processes, and materials. Students will complement studio practice with an increased art historical understanding of the photography medium through slide presentations to provide numerous and diverse visual references to inform the continued development of student work. Frequent class critiques offer students an opportunity to participate in a dialogue that will help them to refine the vocabulary and visualization skills necessary for critical evaluation of photographic work. **Students must provide their own 35mm manual SLR camera. Prerequisite: Photography I**

0031	Ceramics I	1.00	9-10
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Ceramics I is a full year course that provides an introduction to ceramics materials, techniques, and aesthetics. Students will produce both sculptural and functional objects. Fundamental explorations will include: clay body components; basic hand-building techniques including pinch, coil, slab, and mold; wheel-throwing techniques; surface decoration, including texture, color, basic glaze composition and methods of application; and the firing process including common kiln types and stages of firing. The design elements and principles of space, proportion, placement, size relationships, weight balance, and volume are stressed to encourage an understanding of three-dimensional form. Traditional and contemporary styles and trends in ceramics will be explored through visual presentation and research to provide diverse visual references to inform student work. Frequent class critiques offer students the opportunity to participate in a dialogue that will help them to develop the vocabulary and perceptual skills necessary for in-depth critical evaluation.

0035	Ceramics II	1.00	10
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Ceramics II is a full year course that extends the investigation of ceramic materials, techniques and aesthetics introduced in Ceramics I. Students will explore more in-depth utilization of the forming processes of hand-building and wheel-throwing to produce sculptural and functional objects that express the visual, tactile, and intellectual possibilities available through the medium of clay. Students will be challenged to explore the relationship between material and the effective communication of ideas. Experimentation with alternative clays and other media will be used to extend and refine communication. Students will research specific periods in ceramic history as well as the work of innovative contemporary ceramic artists. **Prerequisite: Ceramics I**

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0077	Design I	0.50	11-12

Design I is an introductory level semester course for beginning art students to explore the fundamentals of design in two-dimensional and three-dimensional media. The course teaches the elements of art and principles of design as used in historical and contemporary art works. Personal expression is encouraged as students use a variety of two-dimensional and three-dimensional visual arts media and processes. Sketchbooks are a significant part of the course for the development of basic drawing skills and the planning of visual art assignments. Frequent class critiques offer students the opportunity to participate in a dialogue that will help them to develop the vocabulary and visualization skills necessary for critical evaluation.

0078	Design II	0.50	11-12
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Design II is a semester course that further develops student knowledge and skills in two-dimensional and three-dimensional media. The course extends the study of the elements of art and principles of design as used in historical and contemporary art works. Student work incorporates more advanced use of a variety of two-dimensional and three-dimensional visual arts media and processes. Sketchbooks will continue to be essential for the increased development of drawing skills and artistic ideas. Frequent class critiques offer students the opportunity to participate in a dialogue that will help them to develop the vocabulary and visualization skills necessary for critical evaluation. **Prerequisite: Design I**

0092	Drawing	0.50	11-12
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Drawing is a semester course that will sharpen student visual perception and the ability to draw from direct observation. Investigation of drawing techniques, media, and aesthetics structured upon a solid understanding of the elements and principles of design will guide direct observational drawing that incorporates various genres including still-life, portrait and figure studies, landscape, and architectural interiors/exterior. Line, shape, value, color, texture, space, perspective, and compositional unity in terms of balance, repetition, variety, emphasis, contrast, and proportion will be explored through direct observation utilizing a variety of traditional and contemporary media. Students will employ accuracy and expression as they progress to an increasingly sophisticated level of fluency in drawing and thematic development. Traditional and contemporary styles and trends in drawing will be explored through visual presentation and research to provide diverse visual references to inform student work. Frequent class critiques offer students the opportunity to participate in a dialogue that will help them to develop the vocabulary and perceptual skills necessary for in-depth critical evaluation. **Prerequisite: Design I**

0024	Painting	0.50	11-12
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Painting is a semester course that will sharpen student visual perception and the ability to paint from direct observation. Students will develop an increasingly sophisticated understanding of all aspects of color theory including color foundations of value, hue, chroma, color temperature, color mixing and communication of meaning. Investigation of painting techniques, media, and aesthetics will be structured upon a strong foundation of established observational drawing experience. The elements and principles of design will guide direct observational painting that incorporates various genres including: still-life, portrait and figure studies,

landscape, and architectural interiors/exteriors. Students will employ accuracy and expression as they progress to an increasingly sophisticated level of fluency in painting and thematic development. Traditional and contemporary styles and trends in painting will be explored through visual presentation and research to provide diverse visual references to inform student work. Frequent class critiques offer students the opportunity to participate in a dialogue that will help them to develop the vocabulary and perceptual skills necessary for in-depth critical evaluation. **Prerequisites: Design I, Drawing**

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0081	Photography – Level I	0.50	11-12

Photography-Level I is a semester course that offers students a brief introduction to black-and-white film photography. Students will explore basic photographic skills including camera controls, negative exposure and development, exposing and developing contact prints and enlargements, and presentation. Students will investigate the elements of line, shape, texture, light, motion, and perspective in terms of their relationship to structure, balance, and dynamics—the essential components of excellent composition. Students are presented with an overview of the history of photography through slide presentations to provide numerous and diverse visual references to inform the development of student work. Frequent class critiques offer students an opportunity to participate in a dialogue that will help them to develop the vocabulary and visualization skill necessary for critical evaluation of photographic work.

Students must provide their own 35mm manual SLR camera.

0082	Photography – Level II	0.50	11-12
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Photography-Level II is a semester course that extends the investigation of black-and-white film photography introduced in Photography-Level I 0081. Students will explore and refine photographic skills including camera controls, negative exposure and development, exposing and developing contact prints and enlargement, and presentation. Students will engage in creative investigation of alternative techniques, processes, and materials. Students will complement studio practice with an increased historical understanding of the photography medium through slide presentations to provide numerous and diverse visual references to inform the continued development of student work. Frequent class critiques offer students an opportunity to participate in a dialogue that will help them to refine the vocabulary and visualization skill necessary for critical evaluation of photographic work. **Students must provide their own 35mm manual SLR camera. Prerequisite: Photography-Level I 0081**

0042	Ceramics I	0.50	11-12
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Ceramics I is a semester course that is an introduction to ceramics materials, techniques, and aesthetics. Students will produce both sculptural and functional objects. Fundamental explorations will include: clay body components; basic hand-building techniques of pinch, coil, slab, and mold; wheel-throwing techniques; surface decoration, including texture, color, basic glaze composition and methods of application; and the firing process including common kiln types and stages of firing. The design elements and principles of space, proportion, placement, size relationships, weight, balance, and volume are stressed to encourage an understanding of three-dimensional form. Traditional and contemporary styles and trends in ceramics will be explored through visual presentation and research to provide diverse visual references to inform student work. Frequent class critiques offer students the opportunity to participate in a

dialogue that will help them to develop the vocabulary and perceptual skills necessary for in-depth critical evaluation.

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0043	Ceramics II	0.50	11-12

Ceramics II is a semester course that extends the investigation of ceramic materials, techniques and aesthetics introduced in Ceramics I. Students will explore more in-depth utilization of the forming processes of hand-building and wheel-throwing to produce sculptural and functional objects that express the visual, tactile and intellectual possibilities available through the medium of clay. Students will be challenged to explore the relationship between material and the effective communication of ideas. Experimentation with alternative clays and other media will be used to extend and refine communication. Students will research specific periods in ceramic history as well as the work of innovative ceramic artists. **Prerequisite: Ceramics I**

0083	Ceramics III	0.50	11-12
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Ceramics III is a semester course that offers students an extension of the investigation of ceramic materials, techniques, and aesthetics explored in Ceramics II. Students will engage in more in-depth utilization of the forming processes of hand-building and wheel-throwing to produce sculptural and functional objects that express the visual, tactile, and intellectual possibilities available through the medium of clay. Students will be increasingly challenged to explore the relationship between materials and the effective communication of ideas. Advanced experimentation with alternative clays, combined forming methods, increasingly advanced surface decoration, and additional firing techniques continue to offer diverse options to draw upon to extend and refine communication. Students will engage in in-depth research of specific periods in ceramic history as well as the work of innovative ceramic artists through various resources including museum and gallery visits. Class critiques offer students an opportunity to participate in a dialogue that will help them to refine the vocabulary and visualization skills necessary for critical evaluation of ceramic work. **Prerequisite: Ceramics II**

0084	Ceramics IV	0.50	11-12
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Ceramics IV is a semester course that offers students an intensive extension of the investigation of ceramic materials, techniques, and aesthetics explored in Ceramics III. Students will engage in advanced, concentrated study of Ceramics designed to develop the student's individual style, technique, and personal idiom of expression toward the production of a coherent body of work for portfolio review and exhibition. Students will engage in in-depth research of specific periods in ceramic history as well as the work of innovative ceramic artists through various resources including museum and gallery visits. Ongoing individual critiques offer students an opportunity to participate in a dialogue that will help them to refine the vocabulary and visualization skills necessary for critical evaluation of ceramic work. Successful completion of this course will require additional studio time outside of class. **Prerequisite: Ceramics III and permission of instructor**

0048	Sculpture	0.50	11-12
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Sculpture is a semester course that will increase student understanding of three-dimensional form and space. The design elements and principles of space, proportion, placement, size-

relationships, weight, balance, and volume will guide initial classical investigation of the human form through direct observation and manipulative processes with clay. Students may additionally explore additive, subtractive, and substitution processes utilizing a variety of media. Students will employ accuracy and expression as they progress to an increasingly sophisticated level of fluency in sculpture and thematic development. Traditional and contemporary styles and trends in sculpture will be explored through visual presentation and research to provide diverse visual references to inform student work. Frequent class critiques offer students the opportunity to participate in a dialogue that will help them to develop the vocabulary and perceptual skills necessary for in-depth critical evaluation. **Prerequisite:**

Ceramics I

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0094	Portfolio I	0.05	11-12

Portfolio I is designed to support an intensive investigation of 2D and 3D applications that expands upon the structured explorations established in all required foundational courses. Advanced students will begin in-depth development of a portfolio of work for admissions review at post-secondary competitive professional art schools and university art programs. Student portfolios will reflect breadth, depth, excellence, and the emergence of a personal voice through an emphasis on concept development that allows each student to research and explore enduring ideas, individual interests, and experimental methods. Traditional and contemporary artists/artworks serve to inform student development through discussion, presentation, and interaction at art museums and galleries. Individual and class critiques will be ongoing to promote increased sophistication in the communication of ideas. Portfolio I students will need to devote additional time outside of class to the development of their work.

Prerequisites: Recommendation of instructor, approval of art department lead teacher, recommended successful completion of: Drawing, Ceramics I, Painting, and Sculpture. Advanced sophomore candidates need approval of Art Department Lead Teacher.

0093	Portfolio II	0.05	11-12
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Portfolio II is designed for advanced visual art students to support a continued intensive investigation of 2D and 3D applications that expands upon the structured explorations established in all required foundational courses and in Portfolio I. Advanced students will continue in-depth development of a portfolio of work for admissions review at post-secondary competitive professional art schools and university art programs. Student portfolios will reflect breadth, depth, excellence, and the emergence of a personal voice through an emphasis on concept development that allows each student to research and explore enduring ideas, individual interests, and experimental methods. Traditional and contemporary artists/artworks serve to inform student development through discussion, presentation, and interaction at art museums and galleries. Individual and class critiques will be ongoing to promote increased sophistication in the communication of ideas. Portfolio II culminates in a cohesive body of work that reflects a concentration of concept development and individual voice. Students will present a senior portfolio exhibition and artist's statement. Requirements for Portfolio II will be rigorous; students will need to devote significant time outside of class to the development of their work.

Prerequisites: recommendation of instructor, approval of art department lead teacher, Portfolio I

Business

Career Pathways: Arts, Business and Social Services

Computer Careers

Computer Software Applications
Graphic Design
Advanced Graphic Design
Graphic Animation
App Development & Advanced Graphic Animations
AP Computer Science Principles

Secretarial/Clerical Careers

Computer Software Applications
Accounting
Personal Finance
Graphic Design
Advanced Graphic Design

Business Careers

(Accounting, Marketing, Business Administration, Finance, International Business)

Computer Software Applications
Introduction to Business
Personal Finance
Marketing
Entrepreneurship
Accounting
Advanced Accounting
Graphic Design

Business

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
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0050	Introduction to Business	1.00	9-10
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The course provides an overview of the various business disciplines including economics, marketing entrepreneurship, accounting, international business, business ethics and personal finance. Recommended for students interested in learning more about business careers.

0045	Graphic Design	0.50	9-12
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Students will use graphic design and page layout software to create professional marketing publications. Marketing concepts with a focus on advertising and promotion will be integrated into the publications. This level will focus on how to use the software, while working on smaller publications.

91187	Advanced Graphic Design	0.50	9-12
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Students will use the graphic design and page layout software and the advertising and promotion concepts from Graphic Design to create large publications. The course will be project based. Prerequisite: Graphic Design

0053	Accounting	1.0	10-12
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Accounting is the backbone of business. This course will introduce students to the basic accounting cycle. Students will learn double-entry accounting, preparation of financial statements for sole proprietorships and partnerships. Additionally, students will manage ledgers and prepare payroll records. Students will apply the skills acquired by completing a business simulation that requires students to complete the accounting cycle for a business for one monthly. Students will perform the accounting for a partnership and be introduced to special journals and ledgers. Prerequisite for Advanced Accounting.

91188	Advanced Accounting	1.0	10-12
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This is an excellent course for students planning to pursue a business career or major in business or accounting at the post-secondary level. Students will learn the accounting functions for a departmental merchandising business. Students will also complete the accounting for plant assets and analyze the end of the fiscal period activity and make necessary adjustments to the general ledger. Students will develop an understanding for a corporation, including stocks and bond issues. Students will prepare financial statements for a corporation with the aid of computers. Students will be introduced to management and cost accounting. Finally, students will complete a comprehensive accounting simulation that will reinforce all accounting concepts. Prerequisite: Accounting

0059	Personal Finance	0.50	11-12
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In Personal Finance, the student will learn how to manage a checking account, use credit, file income tax returns, develop budgets, invest savings and purchase insurance. Consumer protection issues will be explored and spreadsheet software will be used to create budgets. This course is not open to students who have completed Introduction to Business.

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0063	Principles of Marketing	0.50	11-12

This course will introduce students to the challenge of modern marketing. Students will examine the function of the market, marketing research, advertising and packaging. There will also be emphasis placed on product planning and pricing concepts. Students will gain an understanding for various companies and their marketing strategies. A prerequisite for Entrepreneurship.

0065	Entrepreneurship	0.50	11-12
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Students learn about starting a business and what characteristics are required of successful entrepreneurs. Planning, marketing and running a small business is discussed. Students will form and run an actual business that will reinforce the concept learned. The course is highly recommended for students who are considering a business career and hope to own their own business. Prerequisite: Principles of Marketing.

0075	Graphic Animation	0.50	11-12
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Students will use animation software and coding to create animations and digital marketing tools for the Internet. Students will start with simple animations and coding projects with the final project focusing on digital advertising.

0144	App Development & Advanced Graphic Animations	0.50	11-12
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Students who have completed graphic animation will be taught advanced animation skills. Students will also learn how to use software to create an app. Students will be able to create animations and apps that incorporate coding. This is a great course for students who are interested in becoming a graphic designer or animator. The projects created in this class involve higher level thinking skills and problem solving skills which result in amazing student created computer generated animations and apps.

91186	Computer Software Applications	0.50	11-12
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This course expands on the student's prior knowledge of software applications and prepares them for successful use in the workplace and college. The students will learn advanced document preparation including business documents, cover letters, resumes and formal letters. Spreadsheet applications will include the creation of spreadsheets, charts and graphs. Project based activities will teach critical thinking while reinforcing already learned skills. Students could use this course to prepare them for MOS certification.

91284 & 91285	AP Computer Science Principles	1.0	11-12
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The AP Computer Science Principles course is designed to be equivalent to a first- semester introductory college computing course. In this course, students will develop computational thinking skills vital for success across all disciplines, such as using computational tools to analyze and study data and working with large data sets to analyze, visualize, and draw conclusions from trends. The course engages students in the creative aspects of the field by allowing them to develop computational artifacts based on their interests. Students will also develop effective communication and collaboration skills by working individually and

collaboratively to solve problems, and will discuss and write about the impacts these solutions could have on their community, society, and the world.

English Course Sequence Summary
Career Pathways: Arts and Communication

Grade 9:	Advanced English I English I
Grade 10:	Advanced World Literature World Literature
Grade 11:	Advanced American Literature American Literature

Note: Four (4) credits of English are required for graduation.

Requirements for Advanced Courses:

1. Teacher recommendation
2. 3.25 cumulative average in subject area.

English

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
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0100	Advanced English I	1.00	9
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This is an advanced English course for students with high ability and achievement. This course includes a challenging curriculum incorporating literature, composition, traditional and electronic research, public speaking, vocabulary development, and grammar usage. Prerequisite: Teacher recommendation, a PSSA score of 1650 in Reading and 1300 in Writing for English and 3.25 cumulative average in English.

0101	English I	1.00	9
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This course is an academic course that serves as a transition from the development of basic communication skills to the appreciation of literature. This course will also include composition writing, public speaking, vocabulary development, grammar and usage, and research skills using traditional and electronic resources. This course will begin to prepare students for college, a technical institute, or the work force.

0105	Advanced World Literature	1.00	10
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This course provides a challenging enhancement of skills developed in Advanced English I. A course for students with high ability and achievement, this course stresses international and multicultural literature as well as composition. Research, using traditional and electronic methods, will be required. Vocabulary, public speaking, and grammar and usage continue to be developed in this course. Prerequisite: Teacher recommendation and a 3.25 cumulative average in English.

0106	World Literature	1.00	10
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This course provides an academic curriculum that prepares students for post-secondary education as well as school-to-work programs. The curriculum includes a study of international and multicultural literature in addition to composition, public speaking, vocabulary for SAT preparation, and grammar. Students will build on their research skills by completing a project that contains a thesis and documentation of sources.

60872	Advanced American Literature	1.00	11
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This course aims to develop an appreciation of classic American authors and writings, crafted during the country's early settlement years and up to the Post Civil War Period. Critical readings and writings will be utilized to further develop the student's individual voice and style in composition. The mastery of selected vocabulary in preparation for the SAT and PSSA will also be emphasized.

60873	American Literature	1.00	11
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This course will explore literature beginning with the Native Americans up to the works of authors included in the Post Civil War Period. Students will write in a variety of genres to explore the various authors' styles as well as to develop an individual voice. Research and technological sources will be used through the course to enhance appreciation and exhibit comprehension of the literature and related periods. The mastery of selected vocabulary in preparation for the SAT and PSSA will also be emphasized.

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0111	Acting	0.50	11-12

Students will work in a hands-on approach to the world of acting by learning about and demonstrating various styles such as Method and Reader's Theatre. This course will involve individual and group work. It will require the students to be up in front of the class often. This course will give students stronger communication skills.

0113	Creative Writing	0.50	11-12
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The course is designed to offer students the opportunity for expression in poetry, descriptive sketches, short stories, narratives, and one-act play writing. Journals and activities to cultivate creativity will precede many of the written assignments. Opportunities for publication will be provided through the literary magazine and various contests. Submission to the Scholastics Writing Competition will be the end product for the fall semester. Publishing of the literary magazine will be a hands-on product of the course, and students will gain the computer/technology skills necessary for the production. This course is offered in both the traditional and blended format.

0116	Modern Novels	0.50	11-12
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Students will be given a choice of selected, modern novels in which to interpret internally (text) and externally (impact of the piece). Students will gain argumentative skills and be exposed to the interpretations of their peers and scholarly critics. This course will prepare college-bound students for critical analysis.

0117	Journalism	0.50	11-12
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This course investigates the elements of news, the composition of news, and the delivery of the news. This is a hands-on course that requires regular research and writing of articles, as well as learning to design and layout a page. Also taught is basic photo composition, the history, and the laws and ethics that govern journalism.

0120	Modern Short Stories	0.50	11-12
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This course covers the study of the art and technique of selected masters of the short story from 1900 to the present. Students will read, discuss, and analyze the short story as a specific literary genre. The course includes the writing of compositions and a research project. The culmination of the course will be the writing of an original short story.

0123	Public Speaking	0.50	11-12
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This course provides students with the opportunity to develop and deliver speeches. Students will be able to conquer old fears and hone new techniques for speaking. Students will be required to analyze the components of a speech, develop a proper outline, critique speeches, as well as present a minimum of four speeches. This course will be of special help to students, who go on to college, seek jobs, or who wish to improve their speaking skills in general.

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0134	Early British Literature	.50	12

This course is a study of British Literature from 449 to the Modern Period including literary classics such as Beowulf, Chaucer, Shakespeare, and the Romantic Age & Victorian Age. This course is best suited for students who wish to enhance their cultural literacy and/or recommended for college bound students. Students who had taken advanced level English courses and who are continuing on to a four year college should consider taking this course. Students will apply critical thinking to the writing of analytical essays that are composed in formal MLA style, developed using the CSQT method, and supported by literary criticism. This course is scheduled only in the fall semester.

0135	British Literature	.50	12
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This course is a study of British Literature from 449 to the Modern Period including literary classics such as Beowulf, Chaucer, Shakespeare, and the Romantic Age & Victorian Age. This course is best suited for students who wish to enhance their cultural literacy and/or recommended for college bound students. Students who had taken advanced level English courses and who are continuing on to a four year college should consider taking this course. Students will apply critical thinking to the writing of analytical essays that are composed in formal MLA style, developed using the CSQT method, and supported by literary criticism. This course is scheduled only in the fall semester

0131 & 0132	Advanced Placement English Literature & Comp	1.00	12
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This college level course will challenge students planning to continue their education in a four year college. AP English centers on the reading, discussion, and interpretation of literature as well as a rigorous approach to composition and literary analysis. Students are expected to have superior writing skills. A student may take the AP English examination at the end of the course. Prerequisite: Teacher recommendation and 3.25 cumulative average in English.

**Family and Consumer Science
Career Pathways: Arts, Business and Social Services**

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0301	Life Skills	1.00	9-10

This course will help students develop knowledge and skills that are needed to survive successfully in today's society. The course introduces students to human development, interpersonal relationships, management and consumerism, financial skills, foods and nutrition, and clothing and textiles. **Students will be required to purchase materials pertinent to a sewing project for the clothing and textiles unit.** Student learning will take place through use of a textbook, student laboratory experiences, and teacher demonstration.

0302	Child Development	1.00	10
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This course will help to make students aware of the mental, physical, and financial requirements needed to be a caregiver for a child or children. It begins with several units that focus on the general needs of children, families, and caregivers. The course continues with units that involve prenatal care of mother and child and the development and care of the infant from birth until age one. **Students will be required to participate in the Baby Think It Over program over the length of one full weekend. It will require responsibility for expensive equipment and will be counted as a major project.** The course will continue with a focus on the toddler and preschool age child in key areas of growth (intellectual, physical, social, moral, and emotional). Study will continue through a child's growth in all areas through the pre-teen age group. Special topics will also include caring for exceptional children and child safety and health.

0303	Child Development I	0.50	10-12
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This course will help to make students aware of the mental, physical, and financial requirements needed to be a caregiver for a child or children. It begins with several units that focus on the general needs of children, families, and caregivers. The course continues with units that involve prenatal care of mother and child and the development and care of the infant from birth until age one. **Students will be required to participate in the Baby Think It Over program over the length of one full weekend. It will require responsibility for expensive equipment and will be counted as a major project.**

0306	Family Management	0.50	10-12
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This course will prepare the student for independent living and family management. The family is discussed and how it survives within the ever-changing global community. The course concentrates on the qualities of strong families, roles, and relationships within families, living on your own, financial responsibility, and other key management skills. Projects include family schedules, car buying and insurance, financial planning, and other projects that attempt to simulate family management.

0307	Fashion and Fabric	0.50	10-12
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This is a course for the student who is interested in the world of fashion and wants to develop basic sewing skills and techniques. The course begins with a background on fashion and textile history and then continues with the practical use of sewing equipment. **Students will be required to purchase materials pertinent to at least two sewing projects.** Students' first project will be for charity, following project(s) will be for personal use.

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0309	Nutrition I	0.50	11-12

This course is designed to provide students with the knowledge and skills a person needs to be able to make good choices for a nutritional diet. Besides learning how to make nutritional choices, students will learn more about why this is so important for our health now and later. After a brief study of safety in the kitchen, students will learn about the nutrients and their use in our bodies. Additionally, students will spend time learning to interpret food and nutritional information as well as the importance of these skills. Finally, dietary modifications and their ability to improve our health will be covered.

0310	Nutrition II	0.50	11-12
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This course is designed to build upon everything covered in Nutrition I to enhance knowledge and skills in this area. Within this class, students will learn about meal planning, food science and our food supply, the global food supply, and the government's role in our food. More importantly, students will learn about how each of these factors have an impact on our own food supply, our own food choices, and our own nutrition. Prerequisite: Nutrition I.

0308	Foreign Foods	0.50	11-12
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This course is a cultural travel through foods. Within this class, students will identify a wide variety of different cultural foods found throughout the world. Students will study global locations such as Latin America, Europe, the Mediterranean, the Middle East, Africa, and Asia and prepare foods special to those areas. Students will be required to research the influences of the cuisine made by geography, cultural impacts, and the countries' economics. Prerequisite: Nutrition I.

0305	Culinary Arts	0.50	12
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This course introduces students to the career of the culinary trades. Students will study the various aspects of the food preparation industry through classroom and lab work. There will also be emphasis on creativity in food preparation. This course is recommended for any student interested in a career in the culinary trades. Prerequisite: Nutrition I and II.

GIFTED PROGRAM

60277	Full Year	1.00 credits
60999	Full Year	1.00 credits
90740	Semester 1	0.50 credits
90741	Semester 2	0.5 credits
90712	Full Year	1.00 credits

60999 & 60277 Full Year 1.00 credits

Gifted Application A & B: Gifted Application is an elective enrichment course designed to challenge gifted students while enhancing real world skills through project-based and inquiry-based learning. Additionally, skills such as teamwork, time management, and risk-taking will be developed. This class centers on high-level competitions that occur at the local, regional and national levels. Preparation, practice and the competitions will serve as the instructional units. Assessments will be based upon a rubric containing aspects of the competition process: communication, participation, team work, etc.

90740 & 90741 Semester 0.5 credits

Gifted Explorations A & B: The Gifted Explorations course is an elective enrichment course designed to allow gifted students to explore fields of study not offered elsewhere during their high school career. Units have included the study and creation of film, sports, 20th century music, and animation. Assessment is often done through writing, although every unit contains a large creative project.

GIS is to be scheduled following a conference with the Gifted Instructor. The conference will occur at the beginning of the school year. This course is offered in both the traditional and blended format.

90712 Full Year 1.00 credits

Gifted Independent Study (GIS): A student enrolling in a GIS is expected to generate a project idea that they will implement with the help of a faculty mentor. Upon completing the project, students will present their results in a formal setting to a grading committee, who will assess and assign a letter grade. Since there are very few deadlines, time management is an important skill that will be developed/improved through the *GIS* process. Past projects have included the creation and performance of original music, architectural design, a political internship, and research papers, among others.

Mathematics Course Sequence Summary
Career Pathways: Engineering, Science and Technology

	Advanced Math	College Prep	Integrated Math
9 th	Advanced Algebra 2 0496	Algebra 1 0413	Algebra 1 0413
10 th	Advanced Geometry 0563	Algebra 2 0564	Integrated Algebra 2 0565
11 th	Advanced Trig/Calculus 60879	Geometry 0415	Integrated Geometry 0568
12 th	AP Calculus AB 0441 & 0442 and/or AP Calculus BC 0557 & 0558 and/or AP Statistics 0443 & 0444 and/or College Algebra 0436 & 0437 and/or College Algebra/HACC 60672	Trig/Pre-Calc 0570	Integrated Algebra 3 0572

Electives may be taken concurrently not in place of the required courses in 10th or 11th grade
 * AP Statistics 0443 & 0444 ** AP Computer Science A 91263 & 91286

Notes:

1. Three (3) credits of Mathematics are required for graduation.
2. Beginning with the class of 2022, all students must pass the Keystone Algebra I Exam to graduate.
3. Geometry and Algebra II are two (2) distinct courses which may be taken simultaneously in order to better prepare the student for college.
4. AP Statistics is an elective. Students in 10th and 11th grade may take it simultaneously with another math class. Seniors may take it as their fourth year of math.
5. AP Computer Science A is an elective. Taking this class does not replace a math class.

To Enter the Advanced Courses, students are required to have:

1. Teacher recommendation.
2. A Proficient or Advanced Score on the Keystone Algebra I Exam
3. 3.00+ (B or higher) cumulative grade point average in math.
4. Successfully complete Algebra I prior to grade 9.

Mathematics

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0496	Advanced Algebra II	1.00	9

This is the 9th grade offering in the accelerated sequence for those students who successfully complete Adv. Algebra I in the 8th grade. Emphasis in this course is placed on real and complex numbers, linear and quadratic equations, systems of equations, series and sequence, and polynomial functions and logs. Students must have their own scientific or graphing calculator. Prerequisite: 8th grade Adv. Algebra I, teacher recommendation, 3.00 cumulative average in subject area and a proficient or advanced score on the Advanced Algebra I Keystone.

0412	Algebra II	1.00	9 -10
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The topics covered in Algebra II are Quadratic Functions and Graphs, Polynomial Functions and Graphs, Variation Functions and Graphs, Rational Functions, Powers and Roots, Exponential and Logarithmic Functions, Probability and Sequence and Series. Prerequisite: Algebra I and teacher recommendation. This course may be taken simultaneously with Geometry.

0413	Algebra I	1.00	9-10
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This course focuses on the real number system and the basic skills essential for problem solving. Students will solve and graph systems of linear equations and inequalities, simplify and graph polynomial expressions, basic data analysis and probability. Prerequisite: Any student entering the high school who has not earned an Algebra I credit.

0563	Advanced Geometry	1.00	10
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This branch of mathematics is concerned with plane figures such as angles, triangles, and quadrilaterals. It considers relationships that are true in a plane and extends these relationships to similar ones that are true in 3 dimensions. The students will also be introduced to concepts of analytic geometry. Prerequisite: A "B" or better average in Advanced Algebra II, teacher recommendation, a proficient or advanced score on the Algebra I Keystone. Students must have their own scientific or graphing calculator.

0415	Geometry	1.00	10-11
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This course deals with two dimensional and three dimensional figures. We will be comparing figures for congruency and similarity. Volume and surface area will also be covered. Geometry will aid in the development of logical reasoning. Prerequisite: Algebra II.

0565	Integrated Algebra II with Trigonometry	1.00	10
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This course is designed to investigate algebra topics with a focus on systems of equations, quadratic functions and polynomials. Students will utilize available technology while exploring applications of course topics, roots, powers, exponential and logarithmic functions, probability, statistics and right triangle trigonometry. Prerequisite: Algebra 1 at the high school.

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0443 & 0444	Advanced Placement Statistics*	1.00	10-12

AP Statistics is a full year course aimed at developing analytical and critical thinking skills as you learn to describe data patterns and departures from patterns, plan and conduct studies, use probability and simulation to explore random phenomena, estimate population parameters, test hypotheses, and make statistical inferences. A graphing calculator is required. This course will satisfy the graduation project. College credits could be earned pending the satisfactory performance on the Advanced Placement Exam. Prerequisite: Algebra II, teacher recommendation and 3.00 cumulative average in math and English.

60879	Advanced Trigonometry and Introduction to Calculus	1.00	11
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Emphasis in this course is on the following functions: logarithms, trigonometry and an introduction to pre-calculus topics, limits and continuity, derivatives and applications of derivatives. This course is not meant to replace college calculus. Prerequisite: Advanced Geometry, teacher recommendation, a 3.00 average in Math and a proficient or advanced score on the Algebra I Keystone. Students must have their own graphing calculator.

0570	Trigonometry and Pre-Calculus	1.00	11-12
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This course will begin with an intensive study of trigonometry and then proceed to advanced topics such as vectors and logic, conics, statistics and probability, with a focus on projects. Students will also begin a study of many topics of traditional pre-calculus courses including limits and continuity. Prerequisite: Geometry

0568	Integrated Geometry	1.00	11
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This course deals with two and three dimensional figures, congruence, volume, surface area, problem solving which incorporates algebraic and geometric concepts. Prerequisite: Integrated Algebra II

0436	College Algebra – Part I	0.50	12
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This course will be an extension of Trig and Pre-Calculus at a more in-depth level. It is recommended for the college bound senior not planning to major in math or science. Topics covered will include fundamental algebraic operations, exponents and radicals, functions and graphs. Students are encouraged to have their own graphing calculator. Prerequisite Advanced Trig/Calc., (may also be taken concurrently with Trig/Pre-Calc by **prior permission of the instructor**).

0437	College Algebra – Part II	0.50	12
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This course will continue the topics covered in College Algebra – Part I and also include systems of equations, higher degree equations and inequalities, logarithms, and matrices. Students are encouraged to have their own graphing calculator. Prerequisite: College Algebra – Part I. College credit could be earned pending satisfactory performance on the college level examination program exam (CLEP test)

60880	Calculus	1.00	12
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Emphasis in this course is on the following functions: trigonometry, functions, graphs of a function, limits and continuity and introduction to derivatives including related rates and other applications. Integrals will be introduced. This course is not meant to replace college calculus. Students are encouraged to have their own graphing calculator. Prerequisite: Trigonometry and Pre-Calculus

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0572	Integrated Algebra III	1.00	12

The course is designed to cover topics in algebra. The course will focus on conic sections, matrices, quadratic functions, all aspects of trigonometry modeling, rational functions, variation, exponential functions and logarithmic functions. It is strongly recommended that the students have their own scientific calculator. Prerequisite: Integrated Algebra 2 and Integrated Geometry

0441 & 0442	Advanced Placement Calculus AB*	1.00	12
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Calculus AB is a full year course in single-variable calculus that includes techniques and applications of the derivative, techniques and applications of the definite integral, and the Fundamental Theorem of Calculus. It is equivalent to at least a semester of calculus at most colleges and universities, perhaps to a year of calculus at some. Algebraic, numerical, and graphical representations are emphasized throughout the course. . A graphing calculator is required. This course will satisfy the graduation project. College credits could be earned pending the satisfactory performance on the Advanced Placement Exam. Prerequisite: Advanced Trig/Calculus – Part II, teacher recommendation, and 3.00 cumulative average in subject area.

0557 & 0558	Advanced Placement Calculus BC*	1.00	12
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Calculus BC is a full year course in single-variable calculus that includes all the topics of Calculus AB (techniques and applications of the derivative, techniques and applications of the definite integral, and the Fundamental Theorem of Calculus) plus additional topics in differential and integral calculus (including parametric, polar, and vector functions) and series. It is equivalent to at least a year of calculus at most colleges and universities. Algebraic, numerical, and graphical representations are emphasized throughout the course. Prerequisite: an "A" or a "B" in Advanced Trigonometry and Calculus

91263 & 91268	Advanced Placement Computer Science A	1.00	10-12
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The course introduces students to computer programming with fundamental topics that include problem solving, design strategies and methodologies, organization of data, approaches to data processing, analysis of potential solutions and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design. Students must have a solid understanding of mathematical reasoning and the concepts of algebra including function notation. This course may be taken in addition to the course required in mathematics.

Music
Career Pathways: Arts and Communication

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
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0450	Band	1.00	9-10
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Band is designed to give students a comprehensive understanding of music through performance experience. Membership is based on playing ability and the need to maintain well-balanced instruction. The band meets every day. Attendance at out-of-school performances is required.

0456	Chorus	1.00	9-10
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Chorus is designed to give students a comprehensive understanding of music through a performance experience. No tryouts are held for the group – interest is the only prerequisite. Chorus is held every day. The chorus performs at the Holiday Concert, the Spring Choral Concert and the Spring Combined Concert.

0460	Orchestra	1.00	9-10
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Orchestra is designed to give students a comprehensive understanding of music through performance experience. No auditions are required of string players. However, wind and percussion players are selected on the basis of the individual's ability and the need to maintain well-balanced instrumentation. Attendance at out-of-school performances is required.

0461	Piano Keyboarding	1.00	9-12
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This course is designed for any student with no previous piano or instrumental experience. Students will learn basic staff notation, simple piano chording, scales, major/minor keys and key signatures, and basic piano literature found in the interactive workbook. This class is self-driven and allows you to move at your own pace. This class is a yearlong class that incorporates both Piano Keyboarding I and Piano Keyboarding II.

0459	Chorale	1.00	10
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Admission is by audition only. This select vocal ensemble provides a comprehensive understanding of music through performance experiences including the Winter, Spring Choral and Spring Combined Concerts as well as several other programs selected by the members of the group. Chorale meets every day and focuses on sightreading, quartet singing and a capella singing.

0464	Music Appreciation	0.50	11-12
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This course is a survey of music history. We cover music from the Medieval, Renaissance, Baroque, Classical, Romantic, Twentieth Century periods and some current Twenty First Century music. The focus is on learning how to analyze music through the use of the seven essential elements of music and appreciate music in the time in which it was written.

0465	Music in the Theater	0.50	11-12
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This course will look at the ways in which music and drama have interacted and will cover a brief reference to opera and the oratorio, the adding of music to plays, the beginning of the “modern” musical, and the latest movements in musical theater. Students will study libretto, songs, discuss the relationship between them, watch select shows, and listen to recordings of shows. There are also elements of student performance embedded in the class.

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0466	Music Understanding	0.50	11-12

This course is a survey of basic and intermediate level music theory. Topics that are covered may include note reading, intervals, chords, keys and key signatures, scales, ear training, note dictation and individual compositions. This course is recommended for students who are considering further study of music. Some prior musical experience is highly recommended. Prior approval of music department is suggested.

0449 & 0451	Band/Chorus	1.00	9-12
0482 & 0458	Orchestra/Chorale	1.00	9-12

Science Course Sequence Summary
Career Pathways: Engineering, Science and Technology

Grade 9	Advanced Biology Earth and Space Science
Grade 10	Advanced Chemistry (must have completed or concurrently taking Algebra II) Biology
Grade 11	Physics Chemistry
Grade 12	Advanced Placement Biology (Grade 11 or 12) Advanced Placement Chemistry (Grade 11 or 12) Advanced Placement Physics (Grade 12) Physics

Note: Three (3) credits of science are required for graduation

Requirements for Advanced Biology Course:

1. Teacher recommendation.
2. 3.25 cumulative average in subject area and math.
3. Students who chose not to continue in Advanced Science courses must take Earth & Space Science.

Science

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0607	Advanced Biology	1.00	9

This course is a system/applications approach to the learning of fundamental biological concepts. This is an accelerated course stressing biochemistry, cell biology, genetics, and ecology. A short unit on the biological kingdom is included. Students will have the opportunity to learn and practice skills used in the learning and study of biology and the development of specific technical research skills used in biology. Prerequisite: CDT Science score, Grade 8 Science Course grade, and teacher recommendation.

0610	Earth & Space Science	1.00	9
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This course is an academically oriented study of geology, astronomy, meteorology and oceanography. The course provides students with the basic knowledge of earth and space science as it relates to them and to their range of experiences. Students will also use their abilities to develop an appreciation of the basic concepts in earth and space science.

0615	Advanced Chemistry	1.00	10
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This accelerated course is a study of matter, atom theory, periodicity, chemical bonding, chemical formulas, reactions and kinetic theory. It infuses concept mastery, high-level critical thinking, problem solving and laboratory experimentation. The intent of this course is to prepare the student for advanced placement or college chemistry. Prerequisite: Algebra II/Trigonometry or concurrent enrollment.

0618	Biology	1.00	10
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This is an academically oriented course stressing biochemistry, cell biology, genetics, and ecology. A short unit of the biological kingdoms is included. Emphasis in the course is placed on biology as a science and science as a process of gathering information and using information rather than on the accumulation of memorized data.

60875	Chemistry	1.00	11
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This descriptive course is a study of matter, atomic theory, periodicity and chemical bonding. It infuses concept mastery, critical thinking, problem solving and laboratory experimentation. This course will also explore other specialized topics of chemistry, complimenting quantitative chemistry. The course includes a study of chemical formulas, reactions, and Kinetic Theory.

0641 & 0642	Advanced Placement Chemistry	1.00	11-12
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This course is taught on the same level as a college freshman general chemistry course. Emphasis is placed on chemical calculations and mathematical formulation of principles. This course is designed to prepare the student for the AP test. Students will be expected to take the test. Those enrolling in this class must have a cumulative GPA of 3.25 or better in science/math courses and department recommendation.

0612 & 0613	Advanced Placement Biology	1.00	11-12
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This course is taught on the same level as a college freshman course in biology. Emphasis is placed on content material needed to score well on the AP test. Those enrolling must have a cumulative GPA of 3.25 or better in science and math courses and have department recommendation. Prerequisite: Honors Chemistry.

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
60877	Physics	1.00	11-12

The course includes a study of measurements, linear motion, projectile motion, and forces. A solid mathematical base is needed to be successful in this course. Students are challenged to think and to apply scientific and mathematical skills. Prerequisite or concurrent Trigonometry.

0646	Environmental Studies	0.50	11-12
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This is a semester course which focuses on an awareness of environmental issues and their impact on humans and ecosystems. Students will gain knowledge of basic ecological structure, function, principles, and interrelationships of ecosystems. Topics include discussion on issues such as hunting, tropical rainforest, energy production, and the ozone. Prerequisite: Biology.

0647	Microbiology – Spring Semester	0.50	11-12
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This course is a semester, lab-oriented course which focuses on an awareness of microbes and their impact on the environment and humans. Students will gain a knowledge of viruses, bacteria, protozoa, and fungi. Topics include infectious diseases, antibiotic use and parasitic relationships. This course is geared towards college bound science and non-science majors. Prerequisite: "C" or higher in Biology. This course is offered in both the traditional and blended format.

0648	Organic Chemistry – Fall Semester	0.50	11-12
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This lab oriented courses focuses on the structure and reactions of carbon compounds. This course is strongly recommended for students desiring a career in the biological, chemical, medical, pharmaceutical and veterinary sciences. Prerequisite: Academic Chemistry I and II or Advanced Chemistry.

0649	Nuclear Chemistry – Spring Semester	0.50	11-12
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This course focuses on the short term and long term implications of the nuclear industry. Topics include: nuclear scientists, public perception and knowledge of the nuclear industry, radiation, half-life, fission, fusion, nuclear weapons and low/high level waste disposal. Prerequisite: Chemistry in the Community I or Academic Chemistry I or Advanced Chemistry.

0650	Waters of the World	0.50	11-12
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This is a semester elective which focuses on an awareness of how water influences the world we live in and its impact on humans and the environment. The course will emphasize components of meteorology and oceanography. The course is designed for college bound students.

0651	Astronomy	0.50	11-12
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This course is a semester elective which focuses on an awareness of astronomical objects, concepts, theories and issues of space exploration and travel. Mathematical equations will be utilized to perform numerous calculations related to celestial and planetary motion.

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0653	Dissecting the Animal Kingdom – Fall	0.50	11-12

This is a semester, lab-oriented course stressing an anatomical approach through a survey of the animal kingdom. This course will provide several in depth, detailed dissection opportunities of selected invertebrate and vertebrate species. Students must be comfortable with the physical investigation techniques of dissection. Prerequisite: "C" or higher in Biology.

0601	Forensic Science	0.50	11-12
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Forensic Science is the study and application of science to the legal system. In recent years, it has become the theme of various television programs and documentaries. This class appeals to the detective in people. Forensic Science is multi-disciplinary and integrates concepts from science, social studies, math and language. The primary focus of the course will be the practice of forensic science and the analysis of physical evidence. It is a research and lab-based course in which students must work safely and efficiently. Those enrolling in this class should have earned at least a "C" in academic chemistry.

0619 & 0620	Advanced Placement Physics	1.00	12
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This course is taught at the same level as a college freshman course in physics. Those enrolling in this class must have a cumulative GPA of 3.25 or better in science/math courses and department recommendation. This course will emphasize basic and fundamental physics principles in greater depth compared to the general physics course. Topics will include mechanics, electricity and magnetism. This course is designed to prepare students for the AP test covering College Board Physics C. AP Calculus must be taken concurrently with AP Physics. Prerequisite: Algebra II/Trigonometry.

Social Studies Course Sequence Summary
Career pathways: Business and Social Services

Grade 9	World Cultures
Grade 10	Western Civilization
Grade 11	Advanced Placement United States History Advanced Placement European History American Studies
Grade 12	Advanced Placement United States History Advanced Placement European History

Note: 1. Three (3) credits of social studies are required for graduation.
One credit must be American Studies or AP American History.

Requirements for Advanced Courses:

1. Teacher recommendation
2. 3.25 cumulative average in subject area.

Social Studies

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0701	World Cultures	1.00	9

This course explores the non-western area of the world. The geography, history, technology and cultural achievements of the various areas are studied in relation to the United States and its people. World Cultures will also examine how various cultures view religion, trade, and customs. It will address cultural diversity and multicultural issues across a broad spectrum of topics.

0702	Western Civilization	1.00	10
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This course explores the geography, history, politics, and culture of Europe. Students will study the history of Europe starting with 1450 through the Renaissance, the rise of monarchies resulting in revolutions, World War I and World War II. A focus on Post World War II Russia and Eastern Europe will conclude this course.

0717 & 0718	Advanced Placement European History	1.00	10-12
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Advanced Placement European History will introduce students in cultural, economical, political and social developments that had a major role in shaping the world from 1450 to the present. The course will also provide a basic narrative of events and movements throughout Europe with a focus on the themes of modern Europe. Students will analyze historical evidence as well as express historical understanding through writing as they examine Europe and it's relationship to other parts of the world. Scheduling for 10th graders will be by teacher and counselor recommendation.

60878	American Studies	1.00	11
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This course explores the major events, trends, and famous personalities involved in the history of American from the start of the Twentieth Century to the beginning of World War II. It includes a study of topics on the: Progressive Era, WWI, the Roaring Twenties, and the Great Depression and an analysis of the role of government and the importance of economic factors in events during this time period. The class will also explore the major events, trends, and famous personalities involved in the history of America from WWII until the present.

0715 & 0716	Advanced Placement United States History	1.00	11-12
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This course is a survey of American history from the colonial period until the present. Students will acquire an understanding for the methods of history and discover that history includes controversies and complex ideas. Writing skills are also emphasized. A cumulative average of 3.25 in social studies or better, department recommendation. This course is offered in both the traditional and blended format.

0707	Psychology – Part I	0.50	11-12
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This course will explore the behavior and relationship between living beings and their environment. Differing theories in psychology and human development will be studied. Students will conduct an experiment in order to gain an understanding of the experimentation process.

0708	Psychology – Part II	0.50	11-12
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This course will focus on the biological influences on behavior as well as thinking and perception. Psychological disorders will be defined, described and categorized. Students will conduct research and develop presentations on topics relating to psychology. Prerequisite: Psychology – Part I.

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0709	Economics	0.50	11-12

This course will focus on introducing students to economics, microeconomics, macroeconomics, and international economics while looking into economic theory, the role of the government in the economy, as well as the world economy.

0710	Political Science	0.50	11-12
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Debate current political issues facing our nation today. Topics include: American foreign policy and the role of the United Nations.

0711	Sociology	0.50	11-12
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This course will examine how people relate to each other and how individual behavior is influenced by others. Topics include: culture, socialization, personality, crime and social control.

0069	Law and Society	0.50	11-12
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The course introduces students to the American legal system by looking into constitutional law, civil law, criminal law, and fair legal procedures. The course is open to all students with an interest in the legal system and particularly to those considering careers in law or law enforcement.

0712	Cultural Diversity in American Society	0.50	11-12
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America's cultural diversity will be the focus of this course. Students will examine and analyze the differences and similarities of socially transmitted behavior, patterns, arts, beliefs and customs of various groups of people. The immigration process of America and the theories of class and society will be studied. This course will take an in depth analysis of the African American, Asian American, Latino American, and Native American Societies. The interaction of these societies with American cultures in the past as well as the present will be explored.

Technology Education Course Sequence Summary
Career Pathways: Video Production, Engineering, Architectural, Graphic Design, Manufacturing/Construction, Science and Technology and STEM

Video/Film Production Careers

Level I- Video Production I (9-12th)
Level II- Video Production II (10th-12th)
Level III- Video Production III (10-12th)
Level IV- Video Production Independent Study
(11-12th)

Mechanical Trade Career
Manufacturing/Construction

Manufacturing Systems (9th-10th)
Wood Systems (10th-12th)
Metal Systems (10th-12th)

Product Design

Design Engineering (9-12th)
CADD (9th-12th)
Mechanical Design (10th-12th)

Engineering/Architectural Career

Design Engineering (9-12th)
Level I- (Computer Aided Drafting and Design)
CADD (9th - 12th)
Level II- Mechanical Design (10th-12th)
Level II- Architectural Design (10th-12th)

Graphic Design Career

Graphic Communication (9-10th)
Graphic Comm. Technology (10th-12th)
Advanced Graphic Communications (10-12th)
Digital Color Photography (10-12th)

Technology Education

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0801	Design Engineering	1.00	9-12

The design engineering course is designed for students to apply their knowledge in a multiple of subjects to solve problems and challenges. The course will cover a wide variety of content and topics from the technology education discipline such as, but not limited to, electronic engineering, energy and power engineering, product design engineering, applied technology, bioengineering along with other field of engineering. Students will learn new content along with methods of how to use the new content, connected to their prior knowledge and research method to formulate new, creative and innovation solutions to real life problems and issues. Emphasis will be placed on the design and research aspect of problem solving.

0802	CADD (Computer Aided Drafting and Design)	1.00	9-12
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This course will provide students with the use of multiple CADD software applications used in engineering and architecture. Students will use CADD software to design and produce accurate, orthographic drawings, three dimensional models, and assemblies. Students will learn the operations needed to design products using computer software. Students will also be exposed to 3-D printing, where they will 3-D print products that they design. Students will also use an architectural software to design a residential structure. They will produce floor plans and three-dimensional views of their design. Prerequisite: None.

0804	Graphic Communications	1.00	9-12
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Graphic design is everywhere. From internet advertisements, posters, billboards along the road, store signs, custom air brushed cars or motorcycles, t-shirt printing and every package a product is placed in for purchase at a store. Graphic designers, designed, prepared layouts, created prototypes and produced these products. This course will provide students with an opportunity to apply a variety of printing processes used within the Graphic Design and Graphic Arts Industry. Activities include project design, screen-printing, image and design preparation on various software programs using computers, photography, and current printing techniques. Students will design, layout and produce personal and commercial products

0805	Manufacturing Systems	1.00	9-10
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This course will provide students with the opportunity to utilize various manufacturing processes and techniques to produce products with both wood and metal materials. Activities in the woodworking area include measurement, project planning, machine materials processing, wood joinery, drawer construction, assembly, and finishing. Their first woodworking project will engage them in many of these processes. They will have a choice between two projects for their second woodworking project, which will include drawer construction. Activities in the metal working area will include measurement, sheet metal layout, cutting, forming, soldering and spot welding processes. Students will also learn about electric arc welding. They will use the Technological Design Process to design and manufacture their scroll shelf bracket. They will utilize the electric arc welding process to join components together. Students will also experience the gas forging process. Emphasis will be placed on shop safety, safe use of tools and machines, and applying woodworking and metal working skills to solve production problems. This course is for 9th and 10th grade students.

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0835	Video Production I	1.00	9-12

This course will provide an overview of video production and digital film technology. Students will demonstrate storyboard creation, broadcast camera techniques, digital computer editing, audio editing and various other video production applications. Activities include the production and development of various video projects, such as commercials, public service announcements, music videos, news broadcasts, movie previews and more. **Students who have taken 9-10 Video Production need to take Video Production II.**

0833	Digital Color Photography	0.50	9-12
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Digital Photography will provide the students with the opportunity to capture images electronically, digitally enhance the images by using photo editing software and produce both printed and electronic image presentations. This course is designed to enhance the student's photography skills in the shot set-up, composition principles, developing a photographer's eye, photo editing techniques and picture producing. Students **must** have a digital camera that allows for manual setting changes.

0821	Graphic Communication Technology	0.50	10-12
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Graphic design is everywhere. From internet advertisements, posters, billboards along the road, store signs, custom air brushed cars or motorcycles, t-shirt printing and every package a product is placed in for purchase at a store. Graphic designers, designed, prepared layouts, created prototypes and produced these products. This course will provide students with an opportunity to apply a variety of printing processes used within the Graphic Design and Graphic Arts Industry. Activities include project design, screen-printing, image and design preparation on various software programs using computers, photography, and current printing techniques. Students will design, layout and produce personal and commercial products

0840	Advanced Graphic Communications Technology	1.00	10-12
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This course will expand the principles of the Graphic Communications course by providing the students with an opportunity to enhance skills and apply those skills to advanced graphic arts and graphic design activities. In this course students will be working with actual companies and organizations and working to meet their graphic design needs. Students will also be learning the Adobe Creative Suite Software package in greater detail.

Prerequisite: Graphic Communications or Graphic Communications Technology.

0836	Video Production II	0.50	10-12
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This course will expand on the first level course. Students will explore advanced studies of digital filming and editing, digital photography, green screens, chrome keying, audio editing and studio production equipment. Activities include the production and development of various video projects such as autobiography, stop motion, community events and more. Prerequisite: Video Production I

0837	Video Production III	0.50	10-12
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This course will expand on the second level course. Student will explore advanced technology used in today's broadcast, video editing and film industry. Students will create projects using special effects, audio editing, lighting and more. Prerequisite: Video Production I and II. Upon completion of Level III student are eligible to apply for the Video Production Independent Study program.

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0806	Architectural Design	1.00	10-12

This course will provide students with a broad understanding of residential architecture. Students will design various residential and commercial architectural designs. The focus of this course will be on residential housing styles, trends, construction, requirements, and materials. Commercial architecture will focus more on code requirements. Using the software, students will design floor plans, electrical plans, site plans, elevations, and 3D views of their designs.

Prerequisite: CADD

0809	Mechanical Design	1.00	10-12
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This course will provide students with an in depth use of SolidWorks software to create, replicate, and test designs. Students will create 3D models, orthographic, section view, auxiliary view, working, and production drawings. The drawing will contain all the necessary dimensions and notes for a given object. Using the CADD software, students will create assemblies to produce a virtual working model. Students will use the problem-solving method to design various solutions to problems. This course is designed to explore various aspects of engineering and design. Students will also be exposed to 3-D printing, where they will 3-D print a product that they design.

Prerequisite: CADD

0838	Metal Systems	1.00	10-12
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This course will provide students the opportunity to work with the basic metal working processes and techniques. During the first half of the year the students will learn many of the basic skills in the metal working area. Activities will include production planning, sheet metal layout and fabrication, stick electrode arc welding, MIG welding, drill press and metal lathe machining processes. They will make a number of assigned projects to learn and develop skills in these areas.

The second half of the year will allow the students to further develop these skills. They will be planning and developing the metal working project of their choice. They will be responsible for developing their own plans and material list. This course will allow them to further develop their skills in the sheet metal, electric arc welding, or machining areas of metal working. Emphasis will be placed on shop safety, safe use of tools and machines, and applying metal working skills to solve production problems. This course is for 10th, 11th, and 12th grade students.

0839	Wood Systems	1.00	10-12
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This course will provide students with the opportunity to work with the basic woodworking processes and techniques. During the first half of the year the students will learn many of the basic skills in the woodworking area. Activities will include measurement, production planning, the steps of squaring a board, woodworking joinery, material processing with the jointer, planer, table saw, miter chop saw, and band saw, project construction, drawer construction, and woodworking finishing.

The second half of the year will allow the students the opportunity to further develop these skills. They will be planning and developing the woodworking project of their choice. They will be responsible for developing their own plans and material list. This will allow them the opportunity to further develop their skills in the planning and design, material processing, woodworking joinery, woodworking construction techniques, and finishing areas of woodworking. Emphasis will be placed on shop safety, safe use of tools and machines, and applying woodworking skills to solve production problems. This course is for 10th, 11th, and 12th grade students.

**Wellness and Fitness
Career Pathways: Social Services**

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0538	Wellness	0.50	9

The wellness curriculum focuses on general health information, personal wellness and decision making skills that will contribute to a healthy lifestyle. This semester course contains curriculum content from the following topics: health risk factors, personality, stress and stress management, mental health, nutrition, social health including families and violence, tobacco, alcohol and drug education, reproduction and sexual responsibility and consequences. Successful completion of this course is required to fulfill graduation requirements. This course will be presented in an online format.

0537	Fitness 9	0.50	9
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The 9th grade class is designed to offer the students an “array of both lifetime and team oriented activities”. This course is also designed to teach the fitness concepts that students can carry with them throughout adulthood to help assess their fitness levels. The course is supplemented with outside reading assignments on health and fitness related topics to help students understand the correlation of both exercising and nutrition in relationship to one’s overall health and wellbeing. The goal is to provide students with the skills, knowledge and confidence needed to live a healthy and physical lifestyle.

0514	Fitness Activities I	0.50	10-12
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This course is designed to enable students to participate in highly competitive team activities as a of improving, or maintaining physical fitness. Some examples of activities that may be done in class include: lacrosse, swat ball, team handball, ultimate football, volleyball, floor hockey, prison ball, and basketball. Students should expect a challenging cardiovascular workout every day.

0515	Fitness Activities II	0.50	10-12
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This course is designed to enable students to participate in a variety of team activities and low organizational games. The focus will be on fitness and team dynamics rather than competition. This course could include: volleyball, basketball, soccer, softball, low organizational aerobic games (scooter hockey, mat ball) and cooperative games.

0517	Exercise and Fitness for Life	0.50	10-12
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This course is designed to enable students to identify activities which could be continued or pursued after their high school years as a means of maintaining physical fitness and managing stress. This course includes classroom instruction and participation in activities such as aerobics, power walking, jogging, Pilates, Zumba, golf, weight training, volleyball, and badminton, and tennis. The focus in this course is lifetime fitness.

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0526	Introduction to Weight Training	0.50	10-12

This course is designed for students to learn different vigorous training techniques that would lead to a higher level of physical fitness. This course includes training that will challenge you mentally and physically using free weights, machines, and other equipment available to the weight room. During the second half of the course you will research, create, and implement a workout plan to achieve a personally derived goal that you have a desire to complete. Topics that will be covered during the course include isometric, plyometric, concentric, eccentric, weight loss, weight gain, flexibility, and goal setting.

0527	Personal Fitness Class	0.50	10-12
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This course is designed to teach students how to develop and implement a personal fitness plan. Student will learn how to assess their fitness, write goals, and create a plan to reach those goals. Classes will split time between the weight room and the gym. On gym days the focus will be on cardiovascular training through competitive team sports (ultimate football, speedball, floor hockey, etc). On the weight room days students will learn training principles, develop and implement a weight training program.

0516	Sports Science	0.50	10-12
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This course was designed for the student who has a strong work ethic and desires to continue their education in a sports science or medical field. This course is designed mostly as a classroom based course, especially in the first quarter of the semester, with the second half of the course covering the weight training aspect. This course will consist of, but not limited to, lecture, group presentations, writing assessments, project work, nutrition and performance lab assessments, (including short and long distance runs), use of technology and demonstration of weight training applications. Lecture topics will include the principles of fitness, maximum and target heart rate zones, body composition, energy/fuel systems, skeletal and muscular systems, nutrition and exercise performance. The training aspect of the course will include knowledge of lifts per muscle groups, traditional resistive training programs and a series of "intensity training protocols".
"Prerequisite: The student must have successfully completed Fitness in grades 9 and 10".

0559	Performance Training for Athletes I - Female	1.00	10
0561	Performance Training for Athletes I - Male		

This course is designed to familiarize the student with an effective approach to athletic conditioning and strength training, and will equip students with the knowledge to develop, track, and maintain a training plan as it relates to athletic movement and performance. In doing so, students will learn the basic principles of strength training and conditioning for athletic performance and personal fitness to implement a weight-training program that works towards achieving personal athletic and fitness goals. The course instruction will include lessons on various training philosophies, movements and techniques. Topics that may be explored include systematic strength training, plyometric (explosive movement) training, speed and agility training, physiology of exercise, and other training methods. Students will also be provided with the opportunity to apply the knowledge and skills acquired through the course activities via a training program. Students will be assessed through written activities and tests as well as measurements of fitness, strength, & conditioning, as a means of evaluating progress.
Requirements: in the year you are taking the course, you must be participating in a Solanco sport.

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0560	Performance Training for Athletes II - Female	1.00	11
0562	Performance Training for Athletes II - Male		

This course is the second level of the performance training course. The purpose of the course is to advance the students level of skill and understanding of athletic conditioning and strength training, and will equip students with a deeper understanding of how to develop, track, and maintain a training plan as it relates to athletic movement and performance. In doing so, students will learn the basic principles of strength training and conditioning for athletic performance and personal fitness to implement a weight-training program that works towards achieving personal athletic and fitness goals. The course instruction will include lessons on various training philosophies, movements and techniques. Topics that may be explored include systematic strength training, plyometric (explosive movement) training, speed and agility training, physiology of exercise, and other training methods. Students will also be provided with the opportunity to apply the knowledge and skills acquired through the course activities via a training program. Students will be assessed through written activities and tests as well as measurements of fitness, strength, & conditioning, as a means of evaluating progress. **Requirements: successful completion of Performance Training 1 - 11th grade in the year you take the course you must be participating in a Solanco sport.**

0541	First Aid and CPR	0.50	10 - 12
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This course will provide the necessary training to become certified in: adult/child/infant CPR, adult AED, and basic first aid. Classes will cover basic anatomy and physiology of the cardiovascular and respiratory systems as they relate to breathing and cardiac emergencies. At the end of the course students who successfully complete the skill and quizzes required will be certified for two years in CPR and AED, and three years for First Aid. Students will also explore health related careers and learn the training required for those careers. An excellent class for any students planning to go to CTC for any health related courses, or plan a career in the health field.

**World Language
Career Pathways: Arts and Communication**

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0201	French I	1.00	9-11

French I is a study of francophone communication, cultures, connections, comparisons, and communities that will target all four language skills: listening, speaking, reading, and writing. Emphasis is placed on using the present tense, asking and answering questions, and creating a linguistic base for further language studies. The course is conducted primarily in French and the students are expected to communicate in French while in the classroom. No prerequisites.

0203	Spanish I	1.00	9-11
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This first-level course places emphasis on the student's acquisition of vocabulary, sentence structure with every day situations, and an overall appreciation of the culture of the target language. Therefore the course is conducted primarily in Spanish and the students are expected to communicate in Spanish in the classroom. The course will also offer and demonstrate comparisons of both the English and Spanish languages and cultures. Spanish I is designed to foster both confidence and capability in speaking Spanish on a rudimentary level and serve as a basis for more detailed instruction and expansion at the second-year level.

0204	French II	1.00	10-12
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French II is a study of francophone communication, cultures, connections, comparisons, and communities that will target all four language skills: listening, speaking, reading, and writing. Emphasis will be placed on learning to narrate with the past tenses and using irregular verbs. The course is conducted primarily in French and the students are expected to communicate in French while in the classroom. It is recommended that students have earned a C or higher in French level I.

0206	Spanish II	1.00	10-12
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Recognizing the theory that the second year in a four-year sequence of language is the most developmental and difficult, the foreign language department endeavors:

- to capsulize the body of knowledge acquired in the first year;
- to introduce and require a working knowledge of all tenses: present, past, future, conditional and commands
- to elicit from the student more active participation in class, not only in the realm of question/answer/prepared statements, but also in the area of critical listening/presentation and defense of opinions.
- the course is conducted in Spanish and the students are expected to communicate in Spanish in the classroom

Prerequisite: Spanish I. It is recommended that a minimum grade of "C" be attained in Spanish I in order to be successful in Spanish II.

0207	French III – Part A	0.50	11-12
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French III - Part A is a combined course with French IV that runs with a year A/B model. It is a study of francophone communication, cultures, connections, comparisons, and communities that will target all four language skills: listening, speaking, reading, and writing. Emphasis will be placed on expanding the use of the present and past tenses in communication and learning to communicate with the subjunctive, future and conditional. Students will work to expand their communication interpretively,

presentationally, and interpersonally on a wide range of topics. The course is conducted primarily in French and the students are expected to communicate in French while in the classroom. It is recommended that students have earned a C or higher in French level 2.

<u>Code</u>	<u>Course</u>	<u>Credit</u>	<u>Grade(s)</u>
0208	French III – Part B	0.50	11-12

French III - Part B is a continuation of knowledge and skills emphasized in Part A. Prerequisite “C” or better in French III – Part A.

0211	Spanish III – Part A	0.50	11-12
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This course involves advanced application of acquired knowledge and skills in the Spanish language. Students will be actively engaged in all four (4) areas of foreign language proficiency: listening, speaking, reading and writing. Students will be expected to demonstrate a working knowledge of all tenses learned to this point as well as tenses learned in Spanish III. Culture is a primary focus at this level. This course is conducted entirely in Spanish. Prerequisite: “C” or better in Spanish II.

0212	Spanish III – Part B	0.50	11-12
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Part B is a continuation of knowledge and skills emphasized in Part A. Prerequisite “C” or better in Spanish III – Part A.

0213	French IV – Part A	0.50	12
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French IV – Part A is a combined course with French III that runs with a year A/B model. It is a study of francophone communication, cultures, connections, comparisons, and communities that will target all four language skills: listening, speaking, reading, and writing. Emphasis will be placed on expanding the use of the present and past tenses in communication and learning to communicate with the subjunctive, future and conditional. Students will work to expand their communication interpretively, presentationally, and interpersonally on a wide range of topics. The course is conducted primarily in French and the students are expected to communicate in French while in the classroom. It is recommended that students have earned a C or higher in French level III.

0214	French IV – Part B	0.50	12
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French IV - Part B is a continuation of knowledge and skills emphasized in Part A. Prerequisite “C” or better in French IV – Part A.

0223	AP Spanish Language and Culture/AP Spanish Literature and Culture	1.0	12
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AP Spanish is comparable to an advanced level college Spanish language and literature course. Emphasizing the use of Spanish for active communication, it encompasses aural/oral skills, reading comprehension, grammar, and composition. The course is designed to:

- Help you understand formal and informal Spanish spoken and written by native speakers from a variety of regions,
- Further develop an active vocabulary sufficient for reading authentic materials in Spanish without depending on a dictionary, and
- Express yourself with reasonable fluency by describing, narrating, inquiring, and developing arguments in Spanish, both orally and in writing, using different strategies for different audiences and communicative contexts.

In this course, special emphasis is placed on the use of authentic source materials and the integration of language skills. Therefore, you will listen, read, write, and speak in order to demonstrate understanding of authentic Spanish-language source materials. Students enrolled in this course will be completing both the AP Spanish Language and Culture exam, as well as the AP Spanish Literature and Culture exam, in May.

Lancaster county career & technology center programs of study (POS)

The Carl D. Perkins Career and Technical Education Act of 2006 requires the development and implementation of career and technical Programs of Study (POS). The Lancaster County Career & Technology Center, under the Act, is now required to offer the relevant academic and technical courses as they relate to the POS. Programs of Study are very similar to, and build on, positive initiatives, such as Tech Prep, career pathways, career academies and career clusters, already underway in career and technical education in Pennsylvania.

Students participating in an approved state Program of Study (POS) must successfully complete the scope and sequence below, in order to be eligible for statewide articulations with post-secondary programs. For consideration in a Program of Study, students must complete an LCCTC application within the designated time period and the student's successful completion of POS secondary academic courses. These academic courses include:

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

“programs of study” secondary scope and sequence

Grade 9	Grade 10	Grade 11	Grade 12
Elective(s) Classes related to Career Interests	Elective(s) Classes related to Career Interests	Elective(s) Classes related to Career Interests	LCCTC Full Day Program
English English 9 CA	English English 10 CA	English English 11 CA or American Literature or British Literature or Dramatic Literature	English <i>LCCTC Post-Secondary Public Speaking**</i> **Required
Math Algebra I or Algebra II or Geometry	Math Algebra II or Geometry or Algebra III	Math Geometry or Algebra III or Precollege Math or Precalculus/Trigonometry or AP Statistics or Applied Calculus or AP Calculus	Math
Science Earth Science or Physical Science or Biology	Science Biology or Chemistry	Science Chemistry or Community Chemistry or Principles of Technology or Physics	Science <i>HACC Dual Enrollment</i> BIO 105 Medical Term* 3 Cr. AH 140 Intro to Allied Health* 3 Cr. <i>PA College of Health Sciences</i> BIO 175 Anatomy & Phys I* 3 Cr. *Health Center Students Only
Social Studies American Studies	Social Studies World History	Social Studies Process of Democracy	Social Studies <i>HACC Dual Enrollment</i> PSY 101 General Psychology 3 Cr. SOC 201 Intro to Sociology 3 Cr. <i>PA College of Health Sciences</i> PSY 100 General Psychology* 3 Cr. *Health Center Students Only
<ul style="list-style-type: none"> • Career Pathways • Electronic Career Portfolio • Job Shadowing related to student's pathway • Career & Work Standards 	<ul style="list-style-type: none"> • Career Pathways • Electronic Career Portfolio • Job Shadowing related to student's pathway • Career & Work Standards 	<ul style="list-style-type: none"> • Career Pathways • Electronic Career Portfolio • Visits to LCCTC & Colleges • Career & Work Standards 	<ul style="list-style-type: none"> • Industry Credentials • Career & Work Standards • Co-Op/Clinical • CTC Portfolio • Articulation to Post-secondary • HACC College in the High School Courses

Lancaster county career & technology center program offerings

Full day Programs - Grade 12

Brownstown Campus	Mount Joy Campus	Willow Street Campus
<p>Construction Technologies Center Architectural CAD – Design Commercial Construction/Management Electrical Construction Technology Heavy Equipment Operation & Basic Maintenance HVAC/R Painting & Interior Finishes Plumbing</p> <p>Information Technology Center Computer Systems Technology</p> <p>Visual Communications Center Commercial Art Digital Design/Print Media Interactive Media & Web Design Photography & Digital Imaging</p>	<p>Advanced Manufacturing Center Electro-Mechanical Engineering Technology Metals Fabrication Welding Technology Precision Machining & Computer-Aided Manufacturing</p> <p>Construction Technologies Center Residential Carpentry</p> <p>Consumer Services Center Early Childhood Education</p> <p>Culinary Arts Center Baking & Pastry Arts Culinary Arts/Chef Event Planning & Tourism Services Management</p> <p>Protective Services Center (at the Lancaster County Public Safety Training Center) Protective Services Academy</p>	<p>Agriscience Center Animal Production Science & Technology Veterinary Assistant</p> <p>Health Care Center Patient Care Technician Dental Assistant Medical Administrative Assistant Medical Assistant Nursing Assistant/Home Health Aide Sports Medicine and Rehabilitation Technician</p> <p>Transportation Technologies Center Automotive Technology Collision Repair Diesel Equipment Technology RV & Outdoor Power Equipment</p>
Part Day Programs - Grades 11 & 12		
<p>Senior Only Advanced Health Careers Grades 11 Intro to Construction Careers Intro to Culinary Careers Intro to Health Careers Intro to Manufacturing Careers Intro to Transportation Careers Intro to Visual Communication Careers</p>	<p>Senior Only Advanced Health Careers Grades 11 Intro to Construction Careers Intro to Culinary Careers Intro to Health Careers Intro to Transportation Careers</p>	<p>Senior Only Advanced Health Careers Grades 11 Intro to Construction Careers Intro to Culinary Careers Intro to Health Careers Intro to Manufacturing Careers Intro to Transportation Careers Intro to Visual Communication Careers</p>

General Information:

Full Day Programs – Grade 12

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

Part Day Programs – Grades 11 & 12

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

More information about Lancaster County Career & Technology and its programs can be found at www.lancasterctc.edu. For enrollment and application information, please contact your school counselor.

Lancaster county career & technology center dual enrollment program



Students Occupationally and Academically Ready

www.education.state.pa.us



**SOAR programs of study
prepare today's student for
tomorrow's high demand
and high wage careers**

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

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

SOAR Mission

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

SOAR Benefits

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

SOAR Articulation

SOAR credits are accepted at higher education institutions.

Website Navigation

- **Background**
Policy information on programs of study
- **Framework**
Templates and crosswalks to implement programs of study
- **Articulation**
Information relating to statewide articulation agreements

Learn More About SOAR

- **Programs of Study (POS)**
- **Planning Your Career**
- **Qualifying for SOAR College Credit**
- **Postsecondary SOAR Partners**

Go to CollegeTransfer.net to see how
SOAR programs are accepted at
higher education institutions



Get The Credit You Have Already Earned



For further information contact:
Bureau of Career and Technical Education
www.education.state.pa.us





advanced manufacturing center

Electro-Mechanical Engineering Technology

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

Metals Fabrication

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

Precision Machining & Computer Aided Manufacturing

Every machine needs the skilled hand of a good operator. In the metal fabrication industry, you might find yourself working with a press brake to cut large sheets of metal to size before they go into the production line. You can operate a rolling machine to transform flat material into a specific curved configuration or angle roll the metal. Shearers cut material into specified shapes. The operator controls the process and makes sure that the work is up to company standards. The program will prepare students in the use of metal working, CNC machining and areas of welding for employment and post-secondary technical training.

Welding Technology

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



agriscience center

Animal Production Science and Technology

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

Veterinary Assistant

The program combines classroom theory and laboratory experience on topics including small animal veterinary care, surgical assisting, laboratory testing, cleaning and feeding techniques. A career as a Veterinary Assistant encompasses all parts of veterinary medicine and assists Veterinary Technicians and Veterinarians in the care of animals. Common duties would include animal restraint, receptionist tasks, surgical assisting, setting up for laboratory procedures, grooming, exercising animals and cleaning. Students learn hands on skills with dogs and cats. Graduates could obtain employment in veterinary hospitals, animal training facilities, boarding kennels, grooming parlors or any business that houses or cares for animals. This program has an affiliation with the Lancaster Humane League and they perform low cost spay and neuter surgeries for the public once a week. This is the only program in the state that has students practicing surgical assisting tasks on a weekly basis. The demand for trained veterinary assistants has steadily increased over the past decade and this growth is expected to continue.



construction technologies center

Architectural CAD – Design

The Architectural CAD–Design program offers a foundation of basic CAD (Computer-Aided Drafting) skills and knowledge, preparing students to attend a two or four-year institution of higher learning or to begin a career as an entry level drafter and/or CAD operator. Students learn techniques through a self-paced program of instruction that includes instruction in AutoCAD software and other architectural concepts. Architectural draftspersons prepare accurate architectural working plans, cross-sections and details for engineering drawings. They may be required to make mathematical calculations, and to estimate both the quantity and cost of materials needed for a project. The program content consists of detailed instruction in basic house design, room planning, floor plans, elevations and preparation of working drawings and details.

Commercial Construction/Management

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

Electrical Construction Technology

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

HVAC/R

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

Painting & Interior Finishes

This program teaches the basics of residential, commercial and industrial painting and flooring. Lessons include fundamentals of color theory, using tools, estimating material amounts, using scaffolding and ladders, reading blueprints. The program is certified by the National Center for Construction Education and Research (NCCER) and is recognized by the Associated Builders and Contractors (ABC). The curriculum covers various painting/finishing techniques including exterior and interior painting, wood finishing and spray painting. Instruction in wall covering installation includes preparing drywall and hanging wallpaper around doors, windows, inside and outside corners, and archways. Students learn how to apply finishes to both antique and new furniture. Flooring lessons include the installation of ceramic tile and vinyl. Students use a wet saw, tile cutter and trowels to prepare and lay ceramic tile for floors, countertops, backsplash, tub surrounds and shower stalls. Work in this field requires bending, kneeling, crawling, working on ladders and the flexibility to maneuver in confined areas.

Plumbing

The high-paying field of plumbing involves the installation and repair of water, drainage, waste disposal and gas systems in residential, commercial and industrial buildings. Plumbers also install fixtures, such as bathtubs, sinks and appliances including dishwashers and water heaters. The Plumbing program is certified by the National Center for Construction Education and Research (NCCER) and recognized by the Associated Builders and Contractors (ABC). The program covers blueprint reading, residential systems, fixture and equipment installation, system maintenance, repair and troubleshooting. Other areas include plumbing rough-in, PVC and metal piping, water heater service and system installation, system performance, estimations, soldering, drain line work and using trade tools and equipment. Students acquire job site experiences, such as installing plumbing in residential and commercial buildings, as part of their training. The class is responsible for the installation of all plumbing systems in the new house construction project, including gas mains, water mains, sewer lines and fixtures.

Residential Carpentry

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



consumer services center

Early Childhood Education

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



culinary arts center

Baking and Pastry Arts

The Baking and Pastry Arts program is equipped with the same state-of-the-art tools and machines used in industry settings. The program teaches the functions of ingredients in products, recipe conversions, sanitation, equipment safety and proper food handling. Students gain experience by preparing desserts, pastries and breads, which are sold or served in the Culinary Arts Center restaurant and store. Some of these products include tortes, flans, chocolate specialties, Danish, puff pastries, pies, mousses, specialty cookies, sauces, custards, puddings, icings and a wide variety of both breads and decorated cakes.

Culinary Arts/Chef

In the Culinary Arts/Chef program, students learn how to prepare soups, sauces, meat entrees, vegetable dishes, salads and dressings as well as herb and spice identification. Students prepare menu items ranging from local favorites to classical and international cuisine. Other areas covered include fresh pasta preparation, fabrication of beef, pork and poultry, seafood identification and preparation, appetizers, desserts, plate presentation, garnishing, beverage creation, and restaurant service. Course work also includes purchasing, inventory, menu planning, nutrition, recipe costing and customer service. A major emphasis is placed on sanitation and use and care of kitchen equipment. A pleasant attitude and neat appearance are important when dealing with customers. Individuals need stamina to stand for long periods of time, excellent hand-eye coordination and a keen sense of taste and smell. Students will participate in a variety of serving techniques ranging from beverage service to in room dining to fine dining. An array of customer service skills and techniques will also be evaluated and practiced by each student.

Event Planning & Tourism Services Management

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



health care center

Patient Care Technician

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

Dental Assistant

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

Medical Administrative Assistant

This program prepares students to serve on a healthcare team in the administrative role. A Medical Administrative Assistant requires medical knowledge, organizational and business skills, communication skills, and the ability to meet accepted performance standards of health care workers. The program includes medical terminology with abbreviations, anatomy and physiology, disease processes, law and ethics, medical transcription, insurance procedures, coding, billing, collections, medical records, and electronic medical records. Administrative skills include appointment scheduling, phone technique, filing medical records, maintaining electronic medical records, typing medical reports, filling out insurance forms, banking duties, computer skills, and many other administrative procedures. The program textbooks are written on a college level, so students need excellent reading skills. Students should have basic computer and keyboarding skills upon entering the program. Qualifying students participate in an eight-week externship at a physician's office, hospital, clinic, insurance company, laboratory, pharmaceutical company, etc.

Medical Assistant

Medical assistants are professional, multi-skilled individuals who perform administrative and clinical duties in health care settings. The program includes studies in anatomy and physiology, health insurance coding and billing, medical math, medical terminology, medical law and ethics, pharmacology, clinical and administrative skills. In addition, curriculum includes clinical skills such as phlebotomy, laboratory tests, minor surgical procedures, medication administration and performing electrocardiograms. During the fourth making period, students who have successfully completed program requirements may participate in a six-week clinical experience in a physician's office. The National Health Career Association (NHA) participates with the program to allow medical assistant students to receive certification through this agency. Students who participate in clinical may be eligible to sit for the exams to become certified as a clinical medical assistant, administrative medical assistant, phlebotomist and/or EKG technician. Students planning to pursue further health care training after high school should take the SAT or ACT testing during their junior year.

Nursing Assistant/Home Health Aide

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

Sports Medicine and Rehabilitative Technician

The program combines tasks and theory to introduce students to the various fields of sports medicine and rehabilitation therapy. Students will perform a variety of duties to aid in the successful treatment of patients. This program will prepare students to work as a professional healthcare team member and prepare students that wish to pursue post-secondary training in the various health care fields. The Sports Medicine/Rehabilitation Therapy program pathway can lead to occupations in athletic training, physical therapy, occupational therapy, sports medicine and other related fields.



information technology center

Computer Systems Technology

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



protective services center

Protective Services Academy

The Protective Services programs prepare individuals to apply technical knowledge and skills required to perform entry-level duties in law enforcement, firefighting, emergency medical services, and other public safety services. This program stresses the techniques, methods, and procedures specific to the areas of criminal justice, fire protection, and emergency medical services especially in emergency and disaster situations. Physical development and self-confidence skills are emphasized due to the nature of the specific occupation(s). In addition to the application of mathematics, communication, science, and physics students receive training in social and psychological skills, map reading, vehicle and equipment operations, the judicial system, firefighting, pre-hospital emergency medical care and appropriate emergency assessment, treatment and communication.



transportation technologies center

Automotive Technology

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

Collision Repair

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

Diesel Equipment Technology

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

Heavy Equipment Operation & Basic Maintenance

This program is designed to provide students with the technical and job-related skills to work in the field of heavy equipment operation and maintenance. Students learn skills that prepare them to be heavy equipment operators for excavation and construction. When weather conditions permit, students practice their operation techniques at a training site. Skills are relevant to excavation, site layout, use of transit/laser/ hand levels. The program is certified by the National Center for Construction Education and Research (NCCER) and recognized by the Associated Builders and Contractors (ABC) and also the Associated Pennsylvania Construction Contractors. The course and its curriculum have been developed in conjunction with the Pennsylvania Department of Transportation.

RV & Outdoor Power Equipment

From lawn and garden equipment, such as lawn mowers, lawn and garden tractors, chain saws, leaf blowers, and string trimmers, to vehicles such as motorcycles, dirt bikes, 4-wheelers, and snowmobiles, small engines power many machines that make our lives more fun and convenient. The RV and Outdoor Power Equipment program offers both classroom and lab experience in all phases of repair and maintenance work on outdoor power equipment and recreational vehicles. The program is nationally certified by the Equipment and Engine Training Council (EETC); Outdoor Power Equipment (OPE). It provides instruction and practice in the areas of diagnosis of malfunction, four and two-stroke engines, disassembly of engines, examination of parts, and reassembly of engines, hydrostatic and manual drive units and state inspection.

Study includes various systems including fuel, electrical, lubricating, governing, steering, suspension, and braking systems. Students use an assortment of technical manuals, testing and diagnostic equipment, hand tools and power tools. During the school year, students have the opportunity and training to take EETC exams and the PA State Inspection written and performance tests for motorcycles.



visual communications center

Commercial Art

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

Digital Design/Print Media

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

Interactive Media and Web Design

This is an instructional program that prepares individuals to apply HTML, XML, JavaScript, graphics applications and other authoring tools to design, edit and publish (launch) documents, images, graphics, sound and multimedia products on the World Wide Web. This program includes instruction in internet theory, webpage standards and policies, elements of webpage design, user interfaces, vector tools, special effects, interactive and multimedia components, search engines, navigation, morphing, e-commerce tools and emerging web technologies. Web architects or programmers are responsible for the overall technical construction of the website. They create the basic framework of the site and ensure that it works as expected. Web architects also establish procedures for allowing others to add new pages to the website and meet with management to discuss major changes to the site. Students will have the choice to focus career opportunities in areas of Web Design, Web Development or Client Relations.

Photography & Digital Imaging



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



part-day programs

Advanced Health Careers



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

Introduction to Construction Careers



Intro to Construction is a half-day, foundational program, which introduces students to careers in the construction industry. Students receive basic instruction in carpentry and construction practices, painting and finishing, electricity, masonry, and plumbing. This program is open to students in grades ten or eleven who plan to apply for admission into one of the full-day senior programs in the Construction Technologies Center. In addition to learning basic skills related to the construction trades, students learn the basics of hand and power tools, power equipment, blueprint reading, and trade-related math. The program offers students exposure to site work, concrete forming, rough framing, exterior and interior finishing, energy conservation, drywall installation, residential and commercial painting, and wood finishing. Students are also exposed to basic electricity and plumbing. Masonry instruction includes the development of clay and shale brick and concrete block, paving with masonry materials, and preparing and pouring concrete. This program stresses problem solving and employability skills necessary for career success.

Introduction to Culinary Careers



Intro to Culinary is a half-day foundational program of study which introduces students to the culinary related career areas of cooking, baking, restaurant service techniques, and the hospitality industry. This program is offered to students in grades ten or eleven who plan to apply for admission into one of the full day senior programs at the Culinary Arts Center located at the Mount Joy Campus. Students learn baking techniques by preparing quick breads, cakes, pies, and cookies. Students also learn basic cooking methods, breakfast preparation, soups, salads, sandwiches, fast foods, stocks, basic meat cutting, and the presentation of food. Students also learn retail skills by selling foods that they prepare in class. Working in the food service industry requires excellent hygiene and an emphasis on safety and sanitation (lab cleanup). For success

in Intro to Culinary, an individual must have excellent hand-eye coordination, good arithmetic skills to measure ingredients accurately, the ability to work quickly, strength to lift heavy pots and pans, ability to work with others, and the stamina to stand for long periods of time.

Introduction to Health Careers



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

Introduction to Manufacturing Careers

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

Introduction to Transportation Careers

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

Introduction to Visual Communications Careers

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

