

TWIN VALLEY HIGH SCHOOL



PROGRAM OF STUDIES 2016-2017

EVERY STUDENT, EVERY DAY

A Message from the Principal

The Twin Valley High School course catalog has been developed through a collaborative process involving your teachers, counselors, and administrators. Our goal is to meet the changing needs of every student while providing each of you the necessary 21st century skills required to be successful.

It is important for you to take time to review the course catalog with your parents or guardians. Our counselors, teachers, and administrators will be happy to provide you the appropriate resources and support as you reflect on your future goals and make your final course selections. Regardless of your path following graduation, we urge you to select courses that will challenge you to learn and grow while meeting your needs and addressing your areas of interest. We have a wide range of electives to choose from; however, you may not get your first choice of electives as enrollment determines which elective courses will run.

We are committed to providing you the support you need to have a great high school experience.

Sincerely,

William L. Clements

Principal, Twin Valley High School

School Board of Directors

Mr. Gary McEwen, President	Mrs. Christine Osborn, Vice President
Mr. Robert Sullivan, Treasurer	Mr. Jeffrey Horrocks
Mr. James Bree	Mrs. April Trego
Mr. Stephen Rucci	Mrs. Allison Bolt
Mr. Douglas Metcalfe	Dr. Robert Pleis, Superintendent

High School Administration

Mr. William Clements, Principal	Ms. Brenda Moyer, Assistant Principal
Mr. Matthew Barber, Assistant Principal	Mr. John Guiseppe, Athletic Director

High School Guidance Counselors

	Class of: <u>2018, 2019, 2020</u>	<u>2017</u>
Mrs. Tiffany Perricone	A – F	A – D
Dr. Michele O'Brien	G – K	E – K
Mrs. Diana Gilbert	L – R	L – Q
Mrs. Donna Larson	S – Z	R – Z
Mrs. Cynthia Murray, Transition Coordinator		
Mrs. Randy Waterman, Guidance Secretary		

Each student is assigned to a Twin Valley High School guidance counselor by the first letter of their last name. This year, 9th, 10th, and 11th grade students are assigned differently than 12th grade students.

Table of Contents

Click on any heading below to jump to that portion of the Program of Studies:

Contents

ACADEMIC INFORMATION	4
SPECIAL PROGRAMS	6
BUSINESS AND COMPUTER TECHNOLOGY	8
ENGLISH LANGUAGE ARTS	11
FAMILY AND CONSUMER SCIENCES.....	15
HEALTH AND PHYSICAL EDUCATION.....	17
MATHEMATICS	19
MUSIC	22
SCIENCE.....	24
AGRICULTURAL SCIENCE AND TECHNOLOGY	27
SOCIAL STUDIES.....	30
TECHNOLOGY AND ENGINEERING	33
PROJECT LEAD THE WAY	37
VIDEO PRODUCTION.....	39
VISUAL ARTS.....	41
WORD LANGUAGE	43
BERKS CAREER & TECHNOLOGY CENTER.....	47
CAREER PATHWAYS	48
CAREER CLUSTERS	49
ENGINEERING AND INDUSTRIAL TECHNOLOGIES CAREER CLUSTER.....	50
HEALTH AND MEDICAL PROFESSIONS CAREER CLUSTER.....	51
NATURAL RESOURCES AND ENVIRONMENTAL CAREER CLUSTER.....	52
ARTS AND COMMUNICATIONS CAREER CLUSTER.....	53
BUSINESS/MARKETING/MANAGEMENT CAREER CLUSTER.....	54
COMMUNITY AND CONSUMER SERVICES CAREER CLUSTER.....	55

Academic Information

Graduation Requirements

A student must earn twenty-four (24) credits in grades nine (9) through twelve (12) in order to be eligible for graduation. A minimum of four (4) of the total credits must be in English, four (4) in Social Studies, four (4) in Mathematics, four (4) in Science, and six (6) in elective courses. A student must also earn a total of two (2) credits in the area of Physical Education, Health, and Wellness.

Additional requirements pursuant to 022 Pa. Code § 4.24: Students shall demonstrate proficiency in Literature, Algebra I, and Biology on the associated Keystone Exam or related project-based assessment.

Course Selection

Students will receive a course selection sheet on which they shall indicate the courses in which they wish to be scheduled. The course selection sheet requires the signature of a parent/guardian. High school students will also receive instructions on how to complete the course selection process electronically. The following may be considered:

Course Acceleration: Students may choose to take two levels of core course in their freshman, sophomore or junior year. This “doubling-up” provides the student with more flexibility in subsequent years, including the opportunity to take some of the Advanced Placement courses offered at Twin Valley High School

Year-long Mathematics: Some students may benefit from a slower-paced, remedial study of mathematics. If a student is recommended for year-long mathematics (Algebra I or Geometry), the student will earn two credits in the same mathematics course. This option should be discussed with the student’s teachers and guidance counselor.

Early Graduation: It is possible for a student to satisfy Twin Valley High School’s graduation requirements one or more semesters early. Students who are considering graduating prior to June of their senior year should discuss this with their guidance counselor as soon as possible.

Dropping & Adding Classes

All schedule changes must be requested by August 19, 2016. Requests to change academic levels (i.e. honors level to academic) will be entertained within the first five (5) days of the course. Such requests require administrative approval.

Course Failures

A failing grade in a required course necessitates that the course be taken again. This may occur in one of three ways: retaking the course the following semester if the student’s schedule allows, retaking the course through an online provider during the school year, or retaking the course through an online provider during the summer. Online courses require administrative approval; families will incur the cost of tuition for any online course.

Academic Course Levels

Each course at Twin Valley High School falls into one of three levels: **Advanced Placement, Honors, or Academic**. These levels allow students to choose the appropriate challenge and rigor as they consider their post-secondary future. The following descriptions will help students and parents select the appropriate level.

Advanced Placement (AP): These courses are academically demanding and challenging. Students who plan to enroll in an honors level college program or those who are interested in exploring a subject at the most challenging level should consider taking courses at the AP level. Students receive weighted credit for courses at this level. Many colleges will grant college credit for AP courses if you take the AP Exam and receive a score of 3 or higher. Teacher/counselor recommendation is encouraged to enroll in AP courses.

Honors (H): Honors level courses will cover more material in greater depth, and demand more work than academic level courses. Students must be committed to fulfilling all course requirements. Students choosing honors level

courses should have a strong academic record and a desire to attend a competitive four-year college. Students receive weighted credit for honors level courses.

Academic: With the implementation of the Pennsylvania Core Standards, rigor is demanded at all levels – including academic. Courses at this level will provide a strong academic background in order to prepare students for college and career readiness.

Grade Reporting

At the conclusion of each course, a letter grade is recorded based on the student’s numerical grade as follows:

Numerical Grade	Letter Grade
93-100	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77-79	C+
73-76	C
70-72	C-
67-69	D+
60-66	D
0-59	F

Each letter grade corresponds to a number of quality points per credit. Due to the higher demands and increased rigor inherent in Honors (H) and Advanced Placement (AP) courses, those courses are considered to be “weighted” and thus receive a higher number of quality points.

Grade	Quality Points per Credit		
	Academic	Honors	AP
A	4	4.5	5
A-	3.7	4.2	4.7
B+	3.3	3.8	4.3
B	3	3.5	4
B-	2.7	3.2	3.7
C+	2.3	2.8	3.3
C	2	2.5	3
C-	1.7	2.2	2.7
D+	1.2	1.8	2.3
D	1	1.5	2
F	0	0	0

A student’s Grade Point Average (GPA) is calculated by dividing the total number of quality points earned by the total number of credits attempted. Class rank is determined by GPA and is reported at the end of each semester.

Special Programs

Dual Enrollment Opportunities

Online or on college campus: Students looking to get an early start on college while still in high school have the option of taking college courses while also receiving high school credit through Penn State-Berks, Delaware County Community College, Reading Area Community College, and Albright College. Students in grades 11 and 12 may elect to take one or more courses through these colleges (online or on college campus) in lieu of high school courses. Students will incur tuition costs for these courses. Students considering this option should speak with their guidance counselor.

At Twin Valley High School: Students in grades 10-12 have the opportunity to earn 3 college credits per course while also receiving high school credit through the Business and Computer Technology department. These courses are offered in conjunction with Reading Area Community College and taught by Twin Valley staff at the Twin Valley High School. There is an approximate fee of \$300.00 to receive college credit for these courses (see course descriptions for more details). Look for the RACC icon to indicate these courses.



Educational Field Experience

This is a great opportunity for seniors interested in a career in secondary education or who want to delve deeper into a particular content area or other service area in the Community and Consumer Services Pathway. This course will introduce students to the basic principles of teaching and learning. Students will be assigned to teacher mentors at Twin Valley High School and have the opportunity to choose a specific content area of interest. Students will work daily in an assigned classroom and meet with the coordinator every other week.

Berks Career & Technical Center (BCTC)

BCTC operates as a school of choice, designed for students who are seeking to enhance their educational program with a highly relevant career and technical experience that is connected directly to the real world of business and industry. Over 400 business and industry advisors review and update the school's educational program annually. The BCTC experience provides students with a blend of classroom theory, technical applications in state-of-the-art laboratories, and actual off-campus work-based experiences. Students learn technical skills and earn nationally recognized industry certifications. They apply reading, writing, mathematics, science, communications, and technology in a way that has personal meaning and career relevance. Students enrolled in BCTC will be waived 0.5 PE credit and 1.0 Science credit. Students at BCTC for four (4) years also have a 0.5 Wellness credit requirement waived. Transportation is provided for BCTC students. See page 46 for more information.

Internship

Students in grades 11 and 12 interested in any of the TVHS Career Pathways can gain experience in a particular career area such as a business, a non-profit organization, a K-8 educational setting, or some other workplace. This program will prepare our students for a career, help them examine their career interests, and explore avenues for continuing post-secondary education. Students are assigned to a workplace environment for 1 or more blocks each day to complete their internship for academic credit (see course descriptions for more details).

Flexible Scheduling

Juniors and seniors in good standing may choose a flexible scheduling option. Students exercising this option will not be scheduled for a class during either first or fourth period. Students must have parent/guardian approval and are responsible for their own transportation – students should not be on-campus during their flexible-schedule period. Flexible scheduling may only be selected once per semester. Flexible scheduling is listed as course number 792.

Gifted Support

Twin Valley High School offers support to gifted students through the services of our gifted support teacher. We provide this service to students identified as gifted as an extension to the curriculum the students receive in regular classes. The

gifted support teacher works with these students individually and in groups to provide enrichment to the regular curriculum.

Project Lead the Way (PLTW)

Project Lead the Way (PLTW) is the nation's leading provider of K-12 STEM programs. PLTW's success in preparing students with the knowledge and skills they need to succeed in our global economy has been recognized by colleges and universities, Fortune 500 businesses, and national organizations. Any PLTW course can be used as science elective credit.

Special Education

Twin Valley High School provides learning support and gifted support for those identified students who qualify for specially designed instruction. Referral, testing, and placement in support services occurs through evaluation by a team of educational professionals. Parent, teacher, counselor, principal, or student may request an evaluation to determine the need for Special Education. Co-taught classes in Language Arts, Math, Social Studies, and Science, as well as transition services and information, will be offered in accordance with the Individualized Education Plan (IEP) of eligible students. Please contact the building principal or counselor with specific questions relating to special education services.

Certified Special Education teachers deliver our Special Education services and provide academic support for students identified as having a learning disability. All Special Education services are done in accordance with Pennsylvania's special education regulations.

Business and Computer Technology

Focused on the future, the business and computer technology curriculum parallels the practices implemented in the global marketplace. The curriculum includes emerging, expanding and challenging courses that develop the knowledge and skills necessary for students to succeed in college and career. The internship program allows students to bridge their learning from classroom to workplace. Twin Valley High School has partnered with Reading Area Community College to offer a number of courses for dual high school and college credit.

Business Principles: Grades 10-12 – 1 credit (401)



This course is a survey of the structure of business—its principles, activities, and challenges. It is designed to provide students with an overview of business careers and a working knowledge of business terminology. The course covers facets of business such as ownership, management, production, marketing, human resources, accounting and information systems, economics, legal issues and ethics, and social responsibility. ***Students in grades 10-12 have the option to receive dual enrollment credits with Reading Area Community College for a \$300.00 fee.***

Business Management: Grades 9-12 – 1 credit (402)



This course provides an introduction to the major functions of management-- planning, organizing, staffing, leading, and controlling. Emphasis is also given to the related topics of communication, decision making, organizational culture, teamwork, corporate social responsibility, and interpersonal relations. ***Students in grades 10-12 have the option to receive dual enrollment credits with Reading Area Community College for a \$300.00 fee.***

Accounting Principles: Grades 9-12 – 1 credit (421)

The principles of financial accounting are introduced by the study of the accounting cycle for service and merchandise companies. Emphasis is on analyzing transactions, summarizing them through the use of the general ledger and reporting the results through the preparation of financial statements. The fundamentals of accounting for inventories, accounts receivable, fixed assets, long-term liabilities, internal control, and corporate entities are stressed.

Advanced Accounting: Grades 9-12 – 1 credit (422)



Prerequisite: Accounting Principles

This course is designed to provide a continuation of financial accounting topics for students who have completed Accounting Principles. Emphasis in the course is placed on using financial accounting information for decision making. Accounting theory of all commonly used accounts such as cash, investments, receivables, inventory, fixed and intangible assets, payables, bonds, and stocks are studied, as are accounting systems and controls, financial statement preparation, and analysis. Students will be introduced to the accounting cycle through computerized software. Students interested in careers in the Finance and Accounting and Business and Entrepreneurship Pathways will gain fundamental skills and concepts in this course. ***Students in grades 10-12 have the option to receive dual enrollment credits with Reading Area Community College for a \$300.00 fee.***

Personal Finance: Grades 9-12 – 0.5 credit (405)

This course focuses on how to manage personal finances including savings, credit, goal setting, and personal income taxes. Career exploration will allow students to plan for budgeting now and in the future. There is also an in depth look at the use of investments to increase personal wealth. Return on investing, liquidity, risk, and the importance of diversification will be emphasized. Units on the stock market, fixed-income investments and mutual funds as forms of personal and corporate investment strategies are included. Students participate in an on-line Stock Market Game, competing against each other to determine the daily trading and purchasing winner.

Entrepreneurship: Grades 9-12 – 0.5 credit (456)

In Entrepreneurship, students will learn how to start a business, market products and services, manage employees, and find the financial support critical for new business ventures. As a new entrepreneur, students will complete and present a business plan necessary for obtaining a loan. Students will complete an analysis of an industry and explore challenges of competition.

Sports and Entertainment Marketing: Grades 9-12 – 0.5 credit (403)

Sports and Entertainment Marketing is a unique and innovative course designed for students with an interest in the sports and entertainment industry or marketing in general. This course stresses the utilization of fundamental marketing concepts and will include an orientation to the sports and entertainment industry. Marketing strategies along with topics in sponsorship, pricing, marketing research, endorsements, and promotions will be part of this course. The course will develop critical thinking, decision making and communication skills through real world applications.

Keyboarding/Microsoft Applications: Grades 9-12 – 0.5 credit (411)

In this course students will learn to use the basics of Word, Excel, and PowerPoint, while learning the proper touch typing method to improve typing speed and accuracy. Using an online typing tool, students will perfect the use of standard keyboarding and will learn to type without looking at the keys. Students will also learn about digital citizenship focusing on the responsible use of technology, online safety, and the dangers of cyber bullying.

Web Design and Development: Grades 9-12 – 1 credit (442)



This course will show you how to design and develop attractive and interactive web sites using both a WYSIWYG (What you see is what you get) application as well as programming in HTML, CSS, and JavaScript. Students learn how to plan and design a web site using fundamental web design principles. Students also learn several criteria to evaluate and analyze web page designs. The course focuses on creating sites that are user oriented and which access information easily and quickly. Additional topics include effective use of color and graphics, page layout techniques, navigation, publishing and maintaining web sites. Students will learn how to design a web site that is user-friendly, keeping viewers from closing the page right away. *Students in grades 10-12 have the option to receive dual enrollment credits with Reading Area Community College for a \$300.00 fee.*

Computer Science I: Grades 9-12 – 1 credit (243)

Students will have the opportunity to create programs, games, and business applications. Students will learn how to design and develop systems using an Integrated Development Environment (Visual Studio) and the object oriented C# (C sharp) programming language. Students will also learn how to design and create Graphical User Interfaces (GUI) using different types of programs and coding languages.

AP Computer Science Principles: Grades 10-12 – 1 credit (244)

Prerequisite: Computer Science I

Introduces students to the central ideas of computer science, instills the ideas and practices of computational thinking and invites students to understand how computing changes the world. This rigorous course promotes deep learning of computational content, develops thinking skills, problem solving and engages students in the creative aspects of the field. Students will have the opportunity to take the AP Computer Science Principles Exam. This course is strongly recommended for students pursuing the Computer Sciences Pathway.

Internship: Grades 11-12 – 1 Credit/Block/Semester (782)

Students in grades 11 and 12 interested in any of the TVHS Career Pathways can gain experience in a particular career area such as a business, a non-profit organization, a K-8 educational setting, or some other workplace. This program will prepare our students for a career, help them examine their career interests, and explore avenues for continuing post-secondary education. Students are assigned to a workplace environment for 1 or more blocks each day to complete their internship for academic credit.

It is mandatory for students who wish to participate in this program to have a current driver's license along with their own transportation and attend an orientation meeting with coordinators to acquaint themselves with the program. Students who intend to enroll in this program must complete all paperwork by the end of the current school year. Students must secure an approved training station/mentor/employer by the first day of the new school year; otherwise, the student will be scheduled for a full academic schedule. Please choose alternate electives in case your internship assignment does not schedule.

Educational Field Experience (Secondary): Grade 12 – 1 Credit/Block/Semester (785)

This is a great opportunity for seniors interested in a career in secondary education or who want to delve deeper into a particular content area or other service area in the Community and Consumer Services Pathway. This course will introduce students to the basic principles of teaching and learning. Students will be assigned to teacher mentors at Twin Valley High School and have the opportunity to choose a specific content area of interest. Students will work daily in an assigned classroom and meet with the coordinator every other week.

English Language Arts

Language Arts in the Twin Valley School District is organized as a continuum K-12. This cutting edge design was developed with expectations for learners to participate in a variety of reading, writing, research, speaking, and listening activities that enhance and develop skills in all of the aforementioned areas. Successful independent readers with real life literacy skills are the goal.

All High School academic students are expected to read minimally 2 books over the summer; Honors and AP students are expected to read minimally 3 books over the summer. Writing benchmarks on the summer reading texts will be administered the first week of school for all students. Check course description for details. In addition, Honors and Advanced Placement courses are offered to prepare those who excel in English and may wish to pursue a postsecondary education at a competitive college. These courses require additional summer reading and written assignments. Although not mandatory, it is encouraged that those students taking the Honors and Advanced Placement level courses for the first time have earned an A at the academic level and have a recommendation from a previous English teacher.

English 9: Grade 9 – 1 credit (002)

A focus on text structures and forms are the foundation for English 10, 11 and 12. Components of the first year of High School English include Independent Reading, Reading Workshop, Writing Workshop, Speaking and Listening, and Research. Learners read from a wide range of materials and genres at their independent reading levels to practice strategic reading. Mini-lessons in book selection, reading journals, book talks, and reading strategies are key instructional practices in Independent Reading. Reading Workshop focuses on read-aloud, shared readings, guided comprehension, literature circles, speeches, poetry, plays and word studies. Units of study may include but are not limited to mythology and short stories. Writing Workshop focuses on the writing process, journal writing, scribing, shared writing, teacher-directed writing, and self-selected writing. Independent and small group work is integral to the success of the workshop setting. Speaking and Listening is also an integral part in any classroom and is emphasized through formal and informal speaking and listening. These skills are facilitated by means of conversation, and student-centered discussions. Finally, information-literate students access, evaluate, and use information efficiently and effectively. Learners practice the research process that is co-taught by the librarian and the classroom teacher. Projects that explore authentic, real-world problems and discovery are encouraged.

English 9 Honors: Grade 9 – 1 credit (001)

It is assumed that prospective English 9 Honors students desire a more intensive course of study and are highly motivated readers and writers. Learners can expect a faster paced course that covers more material and in greater depth than English 9 classes. Extensive outside reading and writing will be required. A summer reading assignment is required upon entrance to the course, and it will be used to gauge the level and needs of the incoming student.

English 10: Grade 10 – 1 credit (012)

The focus for English 10 is examining genres. Readings reflect American Literature from pre-19th century through Modernism. Components of the second year of High School English complement and include Independent Reading, Vocabulary and Grammar, Reading Workshop, Writing Workshop, Speaking and Listening, and Research begun in ninth grade. Using a wide range of materials, students will explore multiple genres and develop their critical thinking skills. Mini-lessons and analysis on multiple genres are key instructional practices in grade 10. Speaking and listening, is emphasized through formal and informal opportunities. These skills are facilitated by means of prepared formal speeches, informal conversation, and student-centered discussions. **The PA Keystone Exam for Literature will be given at the completion of this course.**

English 10 Honors: Grade 10 – 1 credit (011)

It is assumed that prospective English 10 Honors students desire a more intensive course of study and have demonstrated superior achievement in literacy. In addition to strengthening vocabulary skills and developing students' craft for writing, English 10 Honors focuses on literary movements. Students are required to analyze literature on a deeper level utilizing relevant and critical research. Much of the literature associated with English 10 Honors relates to the literary movements of Puritanism, Romanticism, Transcendentalism, Realism, Naturalism, and Modernism, and students will be required to clearly understand the historical context of specific literature in terms of the characteristics of individual literary movements. Learners can expect an accelerated course that covers additional material in greater depth than English 10 classes. Extensive outside reading and writing will be required. Summer reading assignments are required upon entrance to the course, and will be used to gauge the level and needs of incoming student. **The PA Keystone Exam for Literature will be given at the completion of this course.**

English 11: Grade 11 – 1 credit (022)

Components of the third year of High School English include Independent Reading, Reading Workshop, Writing Workshop, Speaking and Listening, and Research. Growth in reading and writing is the focus of the 11th grade year. Specifically, the English 11 course includes the identification and analysis of literary voice in terms of historical context within literature. Units of study may include, but are not limited to, the exploration, interpretation, and analysis of the novel *The Great Gatsby*, the voice of the Harlem Renaissance, as well as contemporary and classic dramas. Students will not only analyze the writing of various authors, but they will develop and critique their own voice through extensive writing assignments. Vocabulary and grammar skills are a daily element of the course as well as key research strategies and integration of relevant research. Speaking and Listening, which is also an integral point in any classroom, is emphasized through formal and informal communication opportunities. These skills are facilitated by means of prepared formal speeches, informal conversation, and student-centered discussions. Finally, information-literate students access, evaluate, and use information efficiently and effectively. Projects that explore comparative literature are encouraged, as well as projects that facilitate inquiry into real world problems.

English 11 Honors: Grade 11 – 1 credit (023)

The goal of English 11 Honors is to further develop the skills and concepts introduced in English 10 Honors. Since the English 11 Honors course is demanding and intensive, it is intended for students who desire to take advanced level English classes in the future, or for students who exhibit a special interest or proficiency in English. It is encouraged that students registering for this course have maintained at least a B average in English 10H (or an A average in English 10). The course is designed to prepare students to effectively and efficiently analyze literature at an advanced level while strengthening analytical research and writing skills. Students can expect a rigorous reading requirement of both fiction and nonfiction and they will be expected to demonstrate strong literacy and analytical skills at an independent level both through written and verbal communication. In preparation for advanced courses, the class includes substantial student led discussions focusing on analysis, synthesis, and evaluation of works. Additional components of English 11 Honors include Independent Reading, Vocabulary and Grammar, Reading Workshop, Writing Workshop, Speaking and Listening, and Research. Please note that summer reading assignments are required upon entrance to the course, and will be used to gauge the level and needs of incoming students.

AP English Language and Composition: Grade 11 – 1 credit (021)

AP English Language and Composition, an academically focused and intensely demanding course, is recommended to any motivated student planning to continue education after high school who is willing to accept the challenge of a rigorous, college-level English curriculum. It is encouraged that students registering for this course have maintained at least a B average in English 10H (or an A average in English 10). AP students will be required to read and analyze several texts over the summer, with culminating papers/projects due the first day of the school year in August, regardless of students' schedules. Throughout the semester, AP students will closely read and analyze a variety of literary works, predominantly nonfiction, in order to strengthen their own writing skills, their awareness of rhetoric and the effective crafting of

language. Students will be expected to apply their knowledge and skills gained from the study of prose to their own writings. The anticipated result is to enable students to write effectively and confidently in their college courses across the curriculum and in their professional and personal lives (AP English Language and Composition Course Description 6).

English 12: Grade 12 – 1 credit (030)

The English 12 course is designed according to Common Core State Standards with a focus on media literacy. Students will examine the strategies used to communicate ideas in various media as well as how an audience or reader interprets those ideas. Specifically, students will explore a government's efforts to manipulate its citizens in George Orwell's 1984. Students will also analyze contemporary media for use of bias and rhetoric and be able to utilize these devices in their own work. The course includes a comparative analysis of classic literature through text and film interpretations as well as a term paper in which students evaluate a selected social issue as it is presented in various media.

AP English Literature and Composition: Grade 12 – 1 credit (031)

The Advanced Placement course provides a prospect for seniors to pursue and receive credit for college-level work completed at the secondary level. This course is designed to meet the curricular requirements described in the AP English Course Description. Motivated, prospective AP students will participate in a rigorous college-level course. Students will have multiple opportunities for demanding reading, intensive writing and analysis at a beginning college level. Application of these skills will be demonstrated in student writing and frequent sessions of literary discourse. Students must submit all summer reading assignments the first day of school (August) regardless of the students' schedule. Although there is no prerequisite for this course, it is strongly recommended that students have successfully completed AP English Language and Composition or English 11 Honors in their junior year with at least a B average or an A average in English 11.

English Electives

Holocaust Literature: Grades 11-12 – 0.5 credit (024)

Students interested in this half-credit course will explore the facts of the Holocaust and World War II as well as make individual connections with those characters, authentic and fictional, who lived and died during the Holocaust. Such studies may include examining the voices of victim, accounts of resistance, stories of survivors in biographies and memoirs as well as aftermath reflection through fiction, drama, and poetry that honor the victims and survivors of the Holocaust.

Creative Writing: Grades 11-12 – 0.5 credit (038)

Do you enjoy writing? Students will explore a wide variety of writing from poetry to prose to essays. We will study professional pieces to help expand and develop our styles and techniques. Students will have the opportunity to develop independent works as well as participate in activities that develop creativity and writing skills.

Journalism I: Grades 10-12 – 1 credit (015)

In Journalism, students learn to write news, features, editorials, and sports stories and to edit, revise, and proofread. This hands-on course gives students an opportunity to put skills into practice by publishing for district and outside publications. The course also explores the history and role of media in society, the power and responsibility of the press, and careers in the field.

Journalism II: Grades 11-12 – 1 credit (019)

Upon successful completion of Journalism I and recommendation of the teacher, students may take a second year of Journalism. Emphasis will be placed on refining interviewing, writing, editing, layout, photo-journalism skills. The course further investigates the role of and careers within the broad fields of communications. Journalism II students are expected to write for outside publications. Prerequisite: Successful completion (B-average or higher) of Journalism I.

Journalism III: Grades 11-12 – 1 credit (020)

Upon successful completion of Journalism II and teacher recommendation, students interested in pursuing a career in Communications, Education, English, Journalism, or Professional Writing may wish to enroll in a third year of Journalism. Students focus on self-editing skills and mentor Journalism I students. Journalism III students will study current global issues in the media, autonomously complete intensive writing projects, write for outside publications, and explore appropriate writing-oriented careers. Recommendation: Successful completion (B-average or higher) of Journalism II.

Yearbook I: Grades 11-12 – 1 credit (040)

This course will deal with learning elements of yearbook production including theme development & continuity, layout and design, writing and proofing, and basic photography. In addition students will learn to recognize and participate in the business aspects of yearbook production such as meeting deadlines, selling advertising and patrons, increasing yearbook sales, et al. The outcome of this course will be to develop, assemble, and publish The Vallian for the current school year.

Yearbook II: Grades 11-12 – 1 credit (041)

Upon successful completion of Yearbook I, students will take Yearbook II. In addition to what students have learned in Yearbook I, emphasis will be placed on refining layout and design and writing skills as well as taking a more involved role with yearbook organization through taking charge of a specific section.

SAT Preparatory Reading/Writing: 0.5 credit (042)

This SAT Prep course is designed to prepare students for the Reading and Writing sections. The Reading section will focus on critical thinking, sentence completion and verbal skills. The Writing section will focus on effective writing strategies which will assist students in the essay writing process. Also the Writing section will include grammar corrections in sentences and paragraphs. Students will have opportunities to take practice exams and gain valuable test-taking strategies.

Family and Consumer Sciences

Family and Consumer Sciences courses are designed to prepare individuals, male & female, for life and work. Areas to be stressed will be foods and nutrition, preparing for parenthood, child development, clothing and textiles, interior design, decision-making, and human development.

Preparing for Parenthood: Grades 9-12 – 0.5 credit (673)

This half semester course examines child development from birth through the age of five. Students will learn about parenting styles, skills, and various family structures. The effects of teen pregnancy will be examined. Students will use baby simulators over a weekend to experience the time, energy, and patience required to have a baby. We will examine the psychological and sociological effects of adding a baby to the family unit. Child development is examined physically, intellectually, emotionally, and socially. This course will prepare students to teach in Intro To Preschool Lab.

Intro to Preschool Lab: Grades 10-12 – 1 credit (674)

Prerequisite: Preparing for Parenthood

Students will explore child development during the toddler years. Through direct interaction, students will operate a preschool lab two times a week under the supervision of the teacher. The preschool lab is for children 2½ to 3½ years of age. The areas of physical, intellectual, emotional, and social development will be studied. Theory and instruction, preparing instructional materials, and hands-on experience with children are a major part of this course.

Advanced Preschool Lab: Grades 11-12 – 1 credit (675)

Prerequisite: Intro to Preschool Lab and teacher recommendation

Students will explore child development during the preschool years. Through direct interaction, students will operate a preschool lab three times a week under the supervision of the teacher. The preschool lab is for children 4 to 5 years of age. The areas of physical, intellectual, emotional, and social development will be studied. Theory and instruction, preparing instructional materials, and hands-on experiences with children are a major part of this course.

Preschool Advisor I & II: Grade 12 – 1 credit (676, 683)

Prerequisite: Advanced Preschool Lab and teacher recommendation

This course is a continuation of the Preschool Lab program and for students who are seriously considering the field of education, social work, child care, and related fields dealing with children. Students will be expected to work independently completing a more in depth analysis to enhance the students' ability to work with children while still working in the preschool lab. The students have the opportunity to take a leadership role as an assistant to the teacher both in the classroom and lab environments. Level II students will expand upon their role as Preschool Advisor while learning and implementing formative assessment practices which will inform and guide their instruction of the preschoolers.

Family and Consumer Science: Grades 9-10 – 0.5 credit (670)

You will have the opportunity to investigate topics such as: Personal Development, Fitness and Wellness, Child Development, Interior Design, Fashion and Textiles, and Money Management. The course includes a variety of activities including: discussions, labs, debates, large and small group activities, and hands on projects. It's a great introductory course! A materials fee may be assessed for this class.

Fashion and Apparel: Grades 10-12 – 1 credit (680)

This course is for the person who is interested in exploring the world of fashion! You will be given the opportunity to examine garment styles – past, present, and future trends; fashions development and production in the apparel industry. While investigating the fashion world, you will gain expertise in clothing design, wardrobe planning, smart shopping, and clothing care; plus examine the many careers in the fashion and apparel industry. Some of our projects include make-overs and designing outfits for the entire bridal party. It also includes creative opportunities to construct various fashions and/or accessories. A materials fee (for fabric) will be assessed for this class.

Interior Design: Grades 11-12 – 1 credit (679)

How can you turn those dreary four walls into an exciting room? You will have the opportunity to examine, practice and gain expertise in your creative talents relating to interior design. You will investigate topics such as architectural design, developing a design plan, decorating principles, furniture styles, window treatments, flooring, lighting, furniture placement, plus the many careers available in the housing field. There are many hands on assignments, including decorating the home of your dreams and redesigning your bedroom!

Chef's Corner: Grades 9-12 – 1 credit (677)

Have fun cooking while expanding your knowledge and experience in the areas of Nutrition and Wellness, Kitchen Safety, Food Careers, Equipment Selection, Cooking Methods, Food Selection and Storage, and, oh yes... did we mention Food Preparation? While learning to prepare these foods you will increase your culinary skills and appreciation of great tasting foods. Be ready and willing to taste and enjoy the many foods as your skills develop. We guarantee that you will use the information presented in this class your entire life! Basic skills learned in this class will be built upon in Culinary Arts and Pastries and More. A materials fee may be assessed for this class.

Culinary Arts: Grades 10-12 – 1 credit (678)**Prerequisite: Chef's Corner**

If you enjoyed the Chef's Corner class and are interested in expanding your knowledge for personal use or a possible career in the food service industry, this class is for you. On a personal level, you will learn how to prepare food like a gourmet. You will learn everything from setting a gracious table and serving fancy appetizers to spectacular desserts. You will also investigate career paths and practices in the food service industry. A cultural approach to international foods and U. S. regional foods is a popular part of this class. Students become familiar with the geography, climate & culture of countries & regions and explore the foods. In Culinary Arts, students must be willing to open their minds and mouths to new foods! A materials fee may be assessed for this class.

Pastries and More: Grades 10-12 – 1 credit (682)**Prerequisite: Chef's Corner**

In Pastries and More, students will build upon the skills learned in Chef's Corner and learn to make a variety of yeast breads and quick breads. Students will also practice the preparation of different types of cookies, cakes, pastries, and key culinary techniques such as meringue production. Students will practice plating eye catching desserts, and designing and decorating their own custom cakes for a special occasion. This class is recommended for students planning to pursue a degree in the culinary or pastry arts as well as culinary enthusiasts.

Health and Physical Education

As a skills and concept-based academic curriculum, the Twin Valley Physical Education course is designed to address, enhance and promote movement forms, fitness-including exercise and training principles, team-building opportunities that incorporate personal and social skills, and also the application of game strategies as they pertain to individual, team, lifetime and outdoor activities. Wellness (709), Health (721), Physical Education 10 (710), and Physical Education 11 (711) are required courses.

Wellness: Grade 9 – 0.5 credit (709)

This program of study enables students to analyze the relationships between diet, physical activity and disease as they are challenged to develop the skills that will allow them to assess personal habits, set nutrition and activity goals, and then implement a plan that will enable them to live a healthy lifestyle. The 9th Grade Wellness Course will utilize both the classroom and the Physical Education Center. While in the Physical Education Center, students will apply classroom-learned concepts by engaging in activities that promote safety and proper technique. This course is a prerequisite to Health (721) and all physical education elective courses.

Health: Grade 10 – 0.5 credit (721)

Prerequisite: Wellness

Building on the foundation established in the 9th grade Wellness course, this program of study supports students in making the critical health choices they will face during adolescence, and enables them to establish healthy behaviors. The program of instruction focuses on the six areas of teen health behavior identified by the U.S. Centers for Disease Control as having the greatest impact on current and future morbidity and mortality, including tobacco use, alcohol and other drug use, intentional and unintentional injuries, diet and physical activity, and sexual behaviors that result in HIV infection, STD or unwanted pregnancy. In this course aimed at helping individuals establish healthy lifestyle patterns through wise decision-making and premeditated choices, students are taught using a variety of learning strategies that actively engage the learner. Based upon the national and state Health education standards, content knowledge and skill development are balanced in an interactive, hands-on learning environment.

Physical Education 10: Grade 10 – 0.5 credit (710)

Prerequisite: Wellness

As a concept and skills-based curriculum the 10th grade physical education course is designed to address, enhance and promote a variety of movement forms so that students will meet the Pennsylvania State Standards for Physical Education. Students will also participate in a variety of team and individual activities that place an emphasis on fitness development, skill acquisition, application of strategic concepts, and teamwork.

Physical Education 11: Grade 11 – 0.5 credit (711)

Prerequisite: Wellness and Physical Education 10

The 11th grade physical education course is structured so that students will meet the Pennsylvania State Standards for Physical Education through the introduction of personal fitness, lifetime, adventure and outdoor activities, team-building opportunities that incorporate personal and social skills and the refinement of techniques and strategic concepts in selected activities.

Health and Physical Education Electives

Exercise Science I: Grades 10-12 – 0.5 credit (708)

Prerequisite: Wellness

This is an elective class that students may take in addition to their regularly scheduled physical education class. Rigorous learning objectives for this course are designed to promote and reinforce healthy and physically active lifestyles which can be maintained throughout all phases of life. All students will learn how to assess and improve the measurable components of fitness; muscular strength and endurance, power, flexibility, agility, speed, cardio-respiratory endurance, and body

composition. After testing individual fitness levels, this course will provide opportunities for students to participate in a daily resistance training and fitness plan which is customized to achieve personally designed goals. Anatomy and physiology are introduced through an in depth investigation of muscular structure, action and energy systems, providing each student with a deeper understanding of why physiological changes are brought on by exercise, and how to manipulate those changes. Individual research opportunities in nutrition, weight management and other student-selected topics will help foster a greater understanding of the benefits of an active physical lifestyle. This class may only be taken one time.

Exercise Science II: Grades 11-12 – 0.5 credit (713)

Prerequisite: Exercise Science I

This is an elective class that students may take in addition to their regularly scheduled physical education class. To qualify, students must have earned a C or better in Exercise Science I. Students will apply knowledge and skills gained in Exercise Science I class in more depth through individually selected projects.

45 Day Fit: Grades 10-12 – 0.5 credit (714)

Prerequisite: Wellness

This is an elective class that students may take in addition to their regularly scheduled physical education class. 45 Day Fit is designed to provide the student with the knowledge, practice, and experiences to achieve and/or maintain high levels of muscular strength, muscular endurance and cardio-respiratory health. Learning objectives within this course incorporate fitness testing, goal-setting, weekly reflections and exercise journaling while integrating technology and current fitness trends. A strong emphasis is placed upon high-intensive total body workouts led by the teacher and/or multiple guest fitness instructors. Physical activities may include, but are not limited to: Aerobics, Cardio Kickboxing, Circuit Training, CrossFit WODs, Dance, DDR/Wii Fit, Hills, Martial Arts/Self-Defense, Military Boot Camps, Power Yoga, Resistance Training, TABATA, Zumba and a variety of indoor/outdoor team fitness challenges. This class may only be taken one time.

Tactical Approach to Invasion Games: Grades 10-12 – 0.5 credit (715)

Prerequisite: Physical Education 10

This is an elective class that students may take in addition to their regularly scheduled physical education class. In this advanced physical education course, students will be able to participate in traditional and non-traditional physical activities in a competitive, fun environment. Course activities will emphasize higher level game strategies and tactics as well as advanced skill development. Personal fitness gains will be achieved through participation in the physical activities. Throughout the course, game management and refereeing fundamentals will also be explored. This course may only be taken one time.

Conflict Resolution: Grades 10-12 – 0.5 credit (681)

Prerequisite: Health

During this 9-week elective course students will learn about conflict and its related terms, identify various factors that may contribute to conflict, discover their personal conflict management style, and recognize conflict in their own lives as well so as to better manage their attitudes and actions. Based upon the work of Dr. Marshall Rosenberg individuals will learn how to resolve conflicts, request without making demands, begin to hear the needs of others, and observe without judgment. The learning content will actively engage all students and be applicable to everyday life.

Mathematics

The mathematics curriculum follows the principles of College Preparatory Mathematics (CPM). CPM emphasizes the connected nature of mathematical concepts. Learning is discovery based with a focus on problem solving and collaboration. A standards-based grading system allows students to build mastery of the content and skills over time. Students interested in accelerating in mathematics may select more than one course per year, as long as the sequence is followed (see prerequisites for each course). Students should discuss any interest in accelerating with their guidance counselor.

Algebra I: 1 credit (201)

This course covers the basic content and skills of a traditional Algebra I course as well as topics in Geometry and Probability. The course focuses on development of the following six strands: Problem Solving, Graphing, Writing and Solving Equations, Ratios, Geometry, and Symbol Manipulation. Emphasis is placed on understanding and making connections between these strands and communicating mathematical concepts in various ways including algebraic expressions, diagrams, and written explanations. There is an expectation that Algebra I content will be completed during the eighth grade year while at Twin Valley Middle School. Students should meet with their high school guidance counselor to discuss options for retaking Algebra I, if needed.

Geometry Honors: 1 credit (203)

Prerequisite: Algebra I

This course is recommended for students that performed at a high level in Algebra I. It is a challenging, fast paced course that covers the basic content and skills of a traditional Geometry course as well as topics in Algebra and Probability. The course focuses on development of the following strands: Algebra, Graphing, Ratios, Geometric Properties, Problem Solving, Spatial Visualization, and Conjecture/Proof. Emphasis is placed on understanding the connections between these strands and communicating mathematical concepts. All students enrolling in Algebra II Honors will be given a summer review packet. Students will be assessed on this material during the first week of class.

Geometry: 1 credit (204)

Prerequisite: Algebra I

This course follows the successful completion of Algebra I. This course covers the basic content and skills of a traditional Geometry course. Focus is on the development of the following strands: Algebra, Graphing, Ratios, Geometric Properties, Problem Solving, Spatial Visualization, and Conjecture/Proof.

Algebra II Honors: 1 credit (205)

Prerequisite: Algebra I and Geometry; Geometry Honors recommended

This course in second year Algebra is a fast-paced, rigorous course intended to be a lead-in to Pre-Calculus. It contains in-depth coverage of a regular Algebra II course with emphasis on those topics necessary for Pre-Calculus. Focus is on the development of the following strands: Problem Solving, Modeling, Functions/Graphing, Systems of Equations, Algorithms, Probability, and Reasoning. All students enrolling in Algebra II Honors will be given a summer review packet. Students will be assessed on this material during the first week of class.

Algebra II: 1 credit (206)

Prerequisite: Algebra I and Geometry

This course covers all of the topics in a traditional Algebra II course. The course focuses on the development of the following strands: Problem Solving, Modeling, Functions/Graphing, Systems of Equations, Algorithms, Probability, and Reasoning. Emphasis is placed on understanding the connections between these strands and communicating mathematical concepts.

Pre-Calculus Honors: 1 credit (211)**Prerequisite: Algebra II; Algebra II Honors recommended**

This fast-paced, rigorous course covers both Trigonometry and Pre-Calculus topics and is intended to prepare students for Calculus. Topics covered include limits, vectors, logarithmic and exponential functions, sinusoidal functions, the unit circle, and area under the curve.

Pre-Calculus: 1 credit (212)**Prerequisite: Geometry and Algebra II OR both Algebra II and Algebra III.**

This course covers both Trigonometry and Pre-Calculus topics and is intended to prepare students for Calculus. Topics covered include logarithmic and exponential functions, the unit circle, and area under the curve.

Calculus: 1 credit (214)**Prerequisite: Pre-Calculus.**

This course includes the study of optimization, limits, differential equations, exponential functions, the relationship between distance and velocity, piecewise functions, and the Fundamental Theorem of Calculus. Students will learn about derivations and integrals simultaneously both geometrically and in context.

AP Calculus AB: 1 credit (213)**Prerequisite: Pre-Calculus; Pre-Calculus Honors recommended**

This intensive, fast-paced course includes the study of elementary functions, limits and continuity, and differentiation and integration of polynomial, trigonometric, and transcendental functions. It prepares students to take the AP Calculus AB Exam and is comparable to a one semester course in college calculus. Students that were not previously enrolled in Honors Pre-Calculus must see the teacher about completing the necessary prerequisite skills not covered in Pre-Calculus.

AP Calculus BC: 1 credit (217)**Prerequisite: AP Calculus AB.**

This intensive, fast-paced course is intended for students that were successful in AP Calculus AB that would like to further their studies in Calculus. The course includes a short review of topics covered in Calculus AB comprising a study of elementary functions, limits, continuity, differentiation and integration, and applications of derivatives and integrals. New topics include differential equations, parametric, vector and polar functions, sequences, and series. The course prepares students to take the AP Calculus BC Exam and is comparable to a one semester course in college calculus.

Statistics: 1 credit (215)**Prerequisite: Algebra II or Pre-Calculus.**

In this course, students will learn unbiased methods of data collection. Using these methods, we will collect data and make use of technology in order to analyze the data. Also covered in this course are probability and statistical inference.

AP Statistics: 1 credit (216)**Prerequisite: Algebra II OR Pre-Calculus; Honors recommended**

This rigorous course is designed to prepare students for the AP Statistics Exam for which they may receive college credit. Students will collect and analyze sample data, and make inferences about a population from the data. We will also study the laws of probability. There will be a strong emphasis on the use of technology in data analysis.

Financial Literacy: 1 credit (208)**Prerequisite: Algebra II**

This course is designed to help students develop competencies in mathematics for personal and business use. Students will apply the math skills they have acquired in previous courses to real-life problem solving such as completing tax forms, analyzing stocks and retirement plans, and making informed fiscal decisions.

SAT Preparatory Math: 0.5 credit (209)**Recommendation: Successful completion of Geometry and Algebra II**

SAT Prep is a course designed to help prepare students for the mathematics portion of the SAT test. The course will enrich math concepts in Arithmetic, Algebra, Geometry, and Probability, and practice will be provided in problem solving and critical thinking. In addition to reviewing the mathematical skills assessed on the SAT test, students will practice test-taking strategies specific to the exam.

Music

*The music program in the high school offers numerous opportunities for the development of each student's musical and creative abilities. The performing groups offer the student an experience that he/she seldom encounters in adult life. Through study and performance a student can learn to appreciate and enjoy music more. **Any combination of Chorus, Band, Orchestra, Jazz Band, and Marching Band will equal 1 full credit.***

Senior Chorus: Grades 9-12 – (551)

This course is designed for students in senior high school who desire to continue developing their vocal ability through the performance of various styles of music. Members of Senior Chorus may also audition for the select A Cappella Choir. Students enrolling in Chorus will be auditioned for voice placement. Chorus members are required to attend three concert performances during the school year. Any student selecting this class for the second, third or fourth year must have successfully completed the previous year.

Senior Band: Grades 9-12 – (561)

The Senior High School Band is the core of the high school woodwind, brass and percussion program. Incorporated into the band are several performing groups; a marching unit that consists of approximately 85 playing members plus a band front of approximately 10 members; a concert band, and several smaller groups such as combos and ensembles. Marching Band is no longer a required part of this class, although members are highly encouraged to participate. Members of the band not only learn to develop playing skill and marching precision but also develop a better understanding and appreciation of music in general. Those who select this course must have adequate playing ability on their instrument. Interested students should contact the high school band director. Students will perform several required concerts each year, and are required to take lessons during the school day. Any student selecting this class for the second, third or fourth year must have successfully completed the previous year.

Marching Band: Grades 9-12 – (560)

Students enrolled in Sr. Band have the option of also enrolling in Marching Band. This group meets once every 4 day cycle during the day, for the 1st Marking Period Only. Students perform at all home football games and several evening parades in the fall and spring. The year begins with Band Camp in August, which is required for all students enrolled in the class. Some evening rehearsals may occur, especially for Percussionists.

Jazz Band: Grades 9-12 – (562)

The Jazz Band is for those students who have an interest in Jazz and popular music. The instruments used in this organization are limited to: trumpets, trombones, saxophones, piano, guitar, drum set and string bass or electric bass. The following instruments are sometimes used: baritone horn, French horn, flute, tuba and vibes. Students who play any of the above instruments may enroll in Jazz Band provided they have the required technical ability. Please speak to the high school band director before selecting this course. With the possible exception of string and keyboard players, students who select Jazz Band must also select Senior Band (561). Drummers should not elect this course unless they have had previous drum set experience. Any student selecting this class for the second, third or fourth year must have successfully completed the previous year.

Senior Orchestra: Grade 9-12 – (570)

The orchestra program at the high school is open to anyone who plays a bowed string instrument, or students who play wind, brass, or percussion instruments (by audition). Students who wish to begin playing a string instrument need prior approval from the director. Along with increasing skills on their particular instruments, orchestral players also develop a deeper appreciation and understanding for music in general. Several outside performances will be required. Any student selecting this class for the second, third or fourth year must have successfully completed the previous year except for entry level players.

Music History & Appreciation: Grades 9-12 – 0.5 credit (563)

Computers are used to explore the history of music, including major composers, the development of styles and forms, and specific characteristics of musical works. In addition to listening to recorded music in class, students may attend live music concerts. Students will explore as many different styles of music as possible, including classical, folk, rock, jazz, contemporary, country and western, and pop. Connections between Music, History, and Visual Art will also be discussed.

Music Theory: Grades 9-12 – 0.5 credit (564)

This course introduces the building blocks of music: scales, chords, rhythm, intervals and key signatures. Harmonic and melodic analysis of music, ear training and sight singing, and composition are also studied. Keyboards and computers are used for basic drill and to develop skills leading to four-part music writing. Much of the work during this class is done independently. Prior music reading skills strongly recommended.

AP Music Theory: Grades 10-12 – 1 credit (566)

Advanced Placement Music Theory is a rigorous course designed to expand and enhance the basic skills of the serious high school musician and the content learned in Music Theory I. Music composition, melodic practices, theory of harmony, aural activities (sight singing) and other musical concepts are studied, encompassing the common practice period up through the Baroque/Classical period (1600-1750). Music from other stylistic periods are also analyzed and discussed. The study, writing, singing and analysis of the 4-part chorale from this common practice period is the common thread to the course study. Students are prepared to take the AP Music Theory Exam when they have completed the course.

Music Keyboard Lab: Grades 9-12 – 0.5 credit (565)

Music Keyboard Lab is for students who have an interest in learning to read music, compose music, and perform music on the piano keyboard while incorporating the use of a computer. Students will use notation and sequencing software to learn basic note reading and how to compose and perform different styles of music. Students may take this course more than once.

Beginning Guitar: Grades 9-12 – 0.5 credit (567)

This is an elective course for beginning guitarists with little or no experience on the instrument. Students will learn open chords, power chords, movable chords, single note (melody) playing, accompaniment techniques, and a variety of playing techniques and styles, including both pick-style and finger-style approaches to the guitar. The course also includes music fundamentals, theory, songs, performances, listening, improvising, and learning to read standard music notation as well as tablature. Students may take this course more than once if the instructor feels that more preparation is necessary to take the next level course. Students may not take this course after taking Intermediate Guitar.

Intermediate Guitar: Grades 10-12 – 0.5 credit (568)

Prerequisite: Beginning Guitar Class or teacher recommendation

This is an elective course for intermediate to advanced guitarists. Students will expand upon playing techniques learned in Beginning Guitar Class. The second-level course will more heavily emphasize music fundamentals, theory, songs, solo performances, group performances, listening, and improvisation. Continued reading of standard music notation and tablature will be included as well. Students must have previously taken Beginning Guitar Class OR receive approval from instructor.

Science

Science and technology are the most rapidly advancing fields of study in the twenty-first century. Three core courses must be taken in sequence: Freshman Physics, Chemistry, and Biology. Students interested in accelerating in science may select more than one course per year as long as the sequence is followed and the appropriate mathematical reasoning skills have been developed (see math Recommendations for each course). Exploration of these basic sciences will provide all students with a strong foundation for the study of elective sciences designed to deepen the student's understanding of one of the four major science disciplines, or, in an interdisciplinary science, build connections among the sciences within the core sequence, or, use their foundational science background in applied courses such as PLTW. Computers, graphing calculators, and other technology are integrated for data gathering and analysis. The fourth credit of science may be chosen from science, agricultural science, or PLTW.

Physics Honors: Grade 9 – 1 credit (301)

The foundation of science is observation, measurement and analysis. This course emphasizes these skills in the study of motion, forces, energy, and electric circuits. Students are led to develop their ability to think about and describe these aspects of the physical world. Classroom experiences provide opportunities for guided observation and measurement with follow-up analysis. Graphing and the mathematics of algebra are routinely used to analyze data. **Students need to have strong math skills and be academically motivated.**

Physics: Grade 9 – 1 credit (302)

Welcome to the fun and exciting world of physics! Freshman Physics is the first science course for all students at Twin Valley High School. Because physics concepts are easily observable and measurable with simple apparatus, students will have the opportunity to design their own experiments and gain direct experience in the scientific process as they discover the laws of physics that govern our world. A systematic understanding of physics provides the basis for understanding chemical and biological processes. Labs are equipped with up-to-date technology to help students collect and analyze data easily and accurately. Course topics will include uniform motion, uniformly accelerated motion, Newton's laws, conservation of energy, and circuits.

Chemistry Honors: Grade 10 – 1 credit (311)

Honors courses are fast-paced and challenging requiring initiative and independent work on the part of the student. Honors chemistry includes all the content of Chemistry but at a deeper level, requiring more initiative and independent work on the part of the student. Chemistry topics will be examined conceptually and analytically with a strong concentration on mathematical problem solving. Application of understanding to additional related topics will further develop critical thinking skills.

Chemistry: Grade 10 – 1 credit (312)

This is an introductory, inquiry based course designed to provide the student with a good foundation in chemistry for future study in the biological, environmental, and medical sciences as well as chemical technology and other related fields. Beginning with a macro perspective of the particulate nature and states of matter, the development of the model of the atom and the relationship of the periodic properties of the elements to modern atomic theory will be studied. Included in these studies are a treatment of gas laws, chemical reactions, formulas and equations, chemical bonding, molecular structure, intermolecular forces, and acids and bases. In the laboratory, students will learn to design and perform experiments in a safe and efficient manner and maintain a lab notebook. Oral and written communication skills will be emphasized.

AP Biology I & II: Grades 10-11 – 2 credits (341, 342)

Prerequisites: Physics and Chemistry; honors recommended.

AP Biology is the honors level 11th grade science course. Motivated students will experience the challenge of a college-level biology course while developing the study and time management skills necessary to become confident, independent learners. At the end of this full year course, students will have completed the four credit science requirement leaving the senior year open for additional advanced science classes or electives in another field of interest.

AP Biology is strongly recommended for any student intending to pursue a science major in college or a medical-related career. Units are determined by the College Board and include molecules and cells, genetics, biotechnology, evolution, populations, plant and animal (human) physiology, and ecology. Twelve required quantitative labs will be supplemented with many additional lab experiences including dissection. Students will be expected to read and organize textbook material on their own so that the class period can be devoted to concept clarification, activities and laboratory experience. Written expression will be emphasized in essays and lab reports in preparation for the AP exam in May. A score of 3 or above on the AP exam may result in earning up to eight college credits. **PA Keystone for Biology will be given at the completion of AP Biology II.**

Biology: Grade 11 – 1 credit (343)

A study of the interactions of organisms with their environment fosters the development of environmental stewardship. Through laboratory experiences and use of multiple models, students will investigate cells as the basic unit of living things, including the biochemistry of cell structure and function. Students will also explore the role of DNA in controlling cell function, reproduction, differentiation, heredity, and evolution. Academic biology incorporates and builds upon the concepts learned in previous science courses (physics and chemistry). Lab experiences include field experimentation, modeling molecular reactions, digital microscopy and DNA fingerprinting. **PA Keystone for Biology will be given at the completion of this course.**

Science Electives

Chemistry II: Grades 10-12 – 1 credit (313)

Prerequisite: Chemistry

This course serves as a second semester of chemistry for students who want to explore additional topics in chemistry as well as first-year topics in more depth. Through scientific inquiry, students will develop an appreciation for the central role of chemistry in current biochemical, environmental and industrial issues. Units of study include, but are not limited to, quantifying and communicating molecular changes, factors affecting chemical reactions, organic chemistry, and applications of chemistry to real life issues. This course would benefit any student who wants additional preparation for college chemistry and a better understanding of chemistry in the everyday world.

AP Chemistry I & II: 2 credits (314, 315)

Recommendation: Successful completion of Algebra II; may be taken concurrently with Biology

AP Chemistry is designed for motivated students interested in the challenge of a first year college general chemistry course. The course integrates conceptual understanding with significant quantitative analysis. Students will deepen their understanding of chemical phenomena and improve their ability to think and solve chemical problems. In accordance with the College Board syllabus, topics include atomic theory, atomic structure, chemical bonding, molecular models, nuclear chemistry, kinetic-molecular theory, liquids and solids, solutions, reaction types, stoichiometry, equilibrium, kinetics, thermodynamics, descriptive chemistry, electrochemistry and organic chemistry. Emphasis will be placed on development of laboratory skills, and oral and written communication of experimental results. Due to the extensive amount of material to be covered, students will be expected to keep up to date on all assignments and come to class well prepared. This course is strongly recommended for students pursuing a science or medical-related degree in college.

AP Physics I & II: Grade 12 – 2 credits (331, 332)

Requirement: Concurrent enrollment or completion of Calculus

Physics AP will expand students' conceptual understanding of mechanics first experienced in Freshman Physics. As determined by the College Board, topics include a mathematical exploration of kinematics, dynamics, forces, work, energy, power, momentum, rotational motion, oscillations, and the motion of bodies in orbit. Students will develop advanced lab and problem solving skills in preparation for the AP Physics-C Mechanics exam. Additional areas of physics not typically available in a high school course will be explored. Electricity, magnetism, optics, wave motion will be explored as part of an in-depth unit on light, including particle, wave and photon models. This course is strongly recommended for students pursuing engineering or science majors in college.

Physics II: Grades 11-12 – 1 credit (333)

Recommendation: Concurrent enrollment or completion of Pre-Calculus

This course begins by planning a high-altitude balloon launch, involving some familiar and some not-so-familiar physics - resulting in our very own still and video images from over 80,000 feet above the earth. The majority of the course focuses on topics in physics not addressed in the freshmen-level course, including waves, sound, static-electricity, magnetism, electro-magnetism, light & optics, and color.

Human Anatomy and Physiology: Grade 11-12 – 1 credit (344)

Prerequisite: Biology or one semester of AP Biology

Anatomy and physiology is a study of the relationship between body structures and their functions. Students who are interested in health or medicine and in learning how body systems function will benefit from this challenging course. The course is strongly recommended as an essential introduction and foundation for any student considering health-related or physical education related careers. An emphasis on hands-on learning using models and activities helps students develop an in-depth understanding of the skin, skeletal, muscular, nervous, cardiovascular, respiratory, digestive, urinary and reproductive systems. Lab experiences may include dissections, muscle sculpting, ECG analysis, blood pressure monitoring, an investigation of animal metabolism, and simulated blood-typing and urinalysis.

Introduction to Astronomy: Grades 11-12 – 1 credit (345)

Astronomy is the oldest of the natural sciences, deeply rooted in the history of almost every society. People have always stared at the sky in wonder at how the universe works; they have used their observations for timekeeping, marking the seasons, and navigation. Modern astronomy continues to explore the origin of stars, planets, and life itself. Continually advancing technology reveals a universe that is vast, varied, and beautiful, and promotes curiosity, imagination, and a sense of shared exploration and discovery. Our exploration of astronomy will include topics such as the earth and moon, the solar system, stars, galaxies, origins of the universe, and tools of astronomers. Come develop your understanding and enjoy a lifelong interest.

Introduction to Forensic Science: Grade 12 – 1 credit (346)

Prerequisite: Completion of Physics, Chemistry, Biology

Forensic Science is the application of science knowledge and technology for the enforcement of laws. Because forensics is an integrated science requiring background knowledge in earth science, physics, chemistry, and biology, the course is open to seniors who have completed these required courses. Students will further develop their laboratory and analytical skills by investigating case studies involving toxicology, entomology, physiology, pathology, ballistics, accident reconstruction, geology and the instrumental analysis of hair, fiber and DNA.

Agricultural Science and Technology

Agriculture is the number one industry in both Pennsylvania and the United States, employing over 20 percent of the U.S. work force. Today's agriculture is science and technology oriented. Diverse areas of agriculture include food science, horticulture, forestry and natural resources, agribusiness, aquaculture, animal and plant science, biotechnology, tissue culture, hydroponics, agricultural business management, and agricultural mechanics. Most courses will revolve around hands-on experiences. FFA membership is open to any student who schedules any agriculture course during the school year. Students may schedule more than one course.

Agricultural Science: Grades 9-10 – 1 credit (651)

This course will follow the National Curriculum for Agriculture Science Education (CASE). Students will explore how mankind has developed agriculture through history as a means to meet basic human needs (food, clothing, shelter) and how we currently seek to improve human life and provide for growing population through agricultural advancement. A student-centered, hands-on laboratory approach will develop students' understanding of the science of agriculture including soil science, water quality, cells, animal and plant science, and classification of species. Students will also gain skills in communication and public speaking. In this foundational agricultural science course, an introduction to record keeping on the online site AET will be taught and students will be assessed on an independent Supervised Agriculture Experience (SAE) project for the semester. FFA membership is open to all students enrolled in this course. This course is not counted as a science credit.

Horticultural Science I: Grades 9-12 – 1 credit (663)

Prerequisite: Agriculture Science or has taken or is currently taking Biology

This course is designed to explore the career field of plant science and management. Students will learn the basics of greenhouse and nursery management, landscape design, business management and floriculture through hands-on activities in addition to classroom learning. Students will raise a greenhouse crop in the school facility, create landscape designs and learn the art of flower arranging. In addition to these skills, students will also study the plant as an organism and learn to identify common garden and landscape plants. Basic recordkeeping will be included and students are required to complete a SAE Project. FFA membership will be open to anyone taking this class.

Horticultural Science II: Grades 10-12 – 1 credit (664)

Prerequisite: Horticulture I

In the second level Horticulture class, students will deepen their knowledge of the plant world. In addition to leading lessons in floriculture and greenhouse crop management, students will raise their own crop and market the product. Units in landscape design, floriculture and turf grass management will be studied. Basic record keeping will be included and students will be required to complete a record book. FFA membership is open to all students in this course.

Aquatic Sciences I: Grades 9-12 – 1 credit (668)

Prerequisite: Agriculture Science or has taken or is currently taking Biology

In this course, students will study the science behind aquatic systems and organisms. Students will learn about the properties of water, water systems, macro invertebrates, aquatic species, and the production and marketing of these organisms. Students will learn the biology of various aquatic organisms, identification methods, and habitat requirements by designing and operating an aquatic system in the aquatics lab. Students will participate in the management and care of the lab and all species grown there. Basic record keeping will be included and students will be required to complete a record book. FFA membership will be open to anyone taking this class.

Aquatic Sciences II: Grades 10-12 – 1 credit (669)

Prerequisite: Aquatic Sciences I or has taken or is currently taking Biology

In this course, students will deepen their understanding of aquatic sciences. Students will create an individual-based project in the field of aquatics that they will complete with the supervision of their teacher. Students will create a portfolio

of their experience. Activities will include both laboratory and field-based experiences. Basic record keeping will be included and students will be required to complete a record book. FFA membership will be open to anyone taking this class.

Agriculture Leadership: Grade 12 – 1 credit (655)

Prerequisite: Agriculture Science I and one additional course in the department

In this course, students will have the opportunity to enhance their experience in agriculture by studying the various aspects of international agriculture and trade, business policies and how the world deals with issues of food distribution and a growing population. Students will help create solutions for feeding a growing world and learn how to compensate for a technology driven society. Students will also practice interpersonal skills of teamwork, leadership and problem solving. Students have the option of receiving their Keystone Degree in this course. FFA membership will be open to anyone taking this class. This course is not counted as a science credit.

Natural Resources & Ecology: Grades 9-12 – 1 credit (660)

Prerequisite: Agriculture Science I or is currently taking or has taken Biology

This course will follow the National Curriculum for Agriculture Science (CASE). Students will work through multiple hands-on activities to explore the world of wildlife and the environment. Topics include: conservation, preservation, and exploitation; biomes and ecosystems; soils and agronomy; water systems and water quality; air quality, particulates, and the greenhouse effect; food webs, interdependence, and energy transfer; biodiversity, ecological succession, and carrying capacity; forestry management & dendrology; topics in environmental science; and multiple use management of wildlife areas. Students will learn to identify over 50 species of wildlife in Pennsylvania and will spend several class periods out of doors working in the school environment. Mobility to walk to the pond and forested area is recommended. FFA membership will be open to anyone taking this class.

Environmental Science & Physiology: 1 credit (662)

Prerequisite: Chemistry and either Biology or Natural Resources & Ecology

This semester long service learning course will offer an overview of topics needed to understand the environmental issues and challenges of today's world. The course will explore the interaction between humans and the environment: How are we impacted by environmental extremes and pollution? How do our choices and actions affect the environment? As an integral part of the course, students will partner with French Creek State Park to gain an invaluable field experience in natural resource management as well as wilderness first aid and orienteering. Students must have a valid driver's license and a means of transportation to/from French Creek State Park. FFA membership will be open to anyone taking this class.

Animal Science I: Grades 9 -12 – 1 credit (652)

Prerequisite: Agriculture Science I or is currently taking or has taken Biology

Animal Science I is an introduction to the world of animal science and the animal agriculture industry. Students will be given the basics in animal care, animal behaviors, and animal handling techniques. Topics of study include animals in society, safety and sanitation, veterinary and animal science terminology, taxonomy and classification of animals, Animal Science Careers and Exploration, Animal Management and Husbandry, and animal care and handling techniques. Students will gain hands on practical experience by caring for the agriculture department's animals. Student projects will include Power Point presentations, research papers and presentations, and display board projects. Animal Science I is a precursor to Animal Science II/ Introduction to Veterinary Science. Students who complete Animal Science I will have acquired the skills and training necessary for success in Animal Science II/ Introduction to Veterinary Science. FFA membership will be open to anyone taking this class.

Animal Science II /Introduction to Veterinary Science: Grades 10-12 – 1 credit (653)

Prerequisite: Animal Science I

In this course, students will acquire the skills and training needed for future success in the field of veterinary science as well as animal science and the animal industry. Topics of study include Sanitation and Safety, Veterinary and Animal Science Terminology, Animal Nutrition, Anatomy, Laboratory Techniques, Parasitology, Principles of Disease, and Animal Hospital Procedures and Clinical Examinations. Students will also gain hands on practical experience by caring for the agriculture department's animals. Student projects will include Power Point presentations, research papers and presentations, and display board projects. Students who complete Animal Science II / Introduction to Veterinary Science will have acquired the skills and training necessary for future success in the world of veterinary and animal science. FFA membership will be open to anyone taking this class.

Social Studies

To be eligible for graduation, students must earn 3.5 credits in the following required courses: Foundations of American History and Government, Twentieth Century American History, Global Studies, and Political Science. Students must also earn an additional 0.5 credit in a Social Studies elective.

Foundations of American History & Government Honors: Grade 9 – 1 credit (101)

This course is a preparatory course for AP American History. Students are required to complete summer reading assignments and analyze primary documents. Units will be presented on the establishment of the United States Constitution (the miracle in Philadelphia), the United States Government, and the history of the Republic from 1789 – 1898 from the Federalist Period, through nationalism, sectionalism, expansion of the frontier, the War Between the States, Reconstruction, Industrialization and America’s emergence from isolationism to becoming a world power. Assessments will include advanced testing comprised of DBQ’s, short answers, and essays.

Foundations of American History and Government: Grade 9 – 1 credit (103)

This introductory course is designed to teach students how to study in the context of history. Units will be presented on the establishment of the United States Constitution (the miracle in Philadelphia), the United States Government, and the history of the Republic from 1789 – 1898 from the Federalist Period, through nationalism, sectionalism, expansion of the frontier, the War Between the States, Reconstruction, Industrialization and America’s emergence from isolationism to becoming a world power.

AP US History: Grade 10 – 1 credit (122)

This rigorous course is designed for the student with high ability and interest in the advanced study of history. Students will utilize their analytical skills and factual knowledge to deal critically with problems in the U.S. from the Colonial experience through present day history. Students will assess historical materials and their relevance to a given interpretive problem, reliability, and importance, and to weigh the evidence and interpretations presented in historical scholarship. Students also hone their skills to present reasons and evidence clearly and persuasively in essay format. The course prepares students for the Advanced Placement US History Exam, which involves fifty-five multiple choice questions, four short answer questions, one document based essay, and one long essay question. Students who score a 3 or above may be eligible for college credit. This class will require more homework time for students.

20th Century American History Honors: Grade 10 - 1 Credit (121)

This course covers the same content as the 20th Century 10 course but in greater depth and complexity. The skill components of the course are accelerated and students are encouraged to develop critical thought and concentrates on the thinking, reading, writing, and oral skills necessary for the college bound student.

20th Century American History: Grade 10 – 1 credit (123)

Why is the twentieth century called America’s century? Experience the nation’s dramatic change from an agricultural country to an industrial powerhouse. Understand the role of the United States in the world wars, the Great Depression, and the Cold War. Follow the progress made in civil rights, study the great leaders and innovators who shaped the nation, and appreciate the influence the United States holds in today’s world.

Global Studies Honors: Grade 11 – 1 credit (132)

This honors course begins with the French Revolution and culminates with an analysis of modern current issues. The course has a heightened focus on research, dissecting informational texts, and the study of primary documents. The analysis of past and present economic, geographic, and political pressures on mankind along with the development of reading, writing, and study skills are paramount in this course.

Global Studies: Grade 11 – 1 credit (133)

People around the world welcomed the dawning of the 21st century with great enthusiasm. Warfare, famine, and general human suffering plagued the previous centuries. Although the world began a new millennium, many of the issues that mankind must grapple with today have their roots in the distant and recent past. This course will focus on how the world evolved economically, politically, and socially by analyzing the -isms of history. Students will gain an appreciation of the differences in the world and will never look at history again the same way.

Social Studies Electives

Sociology: 0.5 credit (143)

This is an introduction to the basic concepts of Sociology or the study of human social behavior with an emphasis on hands-on learning. Topics such as globalization, socialization, conflict, research, culture and social structure will be discussed. Students will participate in current events presentations, debates and researching social issues.

Psychology: Grades 10-12 – 0.5 credit (145)

The study of the mind, psychology tries to explain why people act, think and feel as they do. A behavioral science that concentrates on individual human behavior, psychology studies areas such as personality disorders, emotions, sensations and perceptions, learning, forgetting, personality and intelligence testing, human development and methods and experiments of psychology.

Sports History: 0.5 credit (149)

Following the tragedies of September 11, 2001, athletic contests from high school to the professional level were canceled en mass. In the larger scope of events, the world of sports did not seem that important, but as our nation worked through the grieving process, athletics showed their true value. Sporting events across the nation became places to honor true heroes and acted as much needed distractions. Sometimes sports are simply a backdrop to a larger historical event like 9/11 while other times they are the event itself. For example, Jackie Robinson breaking the color barrier in Major League baseball was not just a watershed event in baseball but also a major step forward in United States history. This course will use sports as a frame of reference to study United States history. It will focus on the people, places, events, and times through which athletes and coaches lived.

History and the Media: 0.5 credit (148)

The world of media in correlation to American popular culture is a part of our daily lives in a variety of different ways. The 20th and 21st centuries have seen a major shift in how media influences current social issues. This course is designed to analyze, discuss, and synthesize media outlets such as movies, music, literature, television, the Internet, and news to determine how the media has influenced history and is influencing current social events. This course will also explore the relationship between popular forms of media and social issues in which they originate. Students will be able to analyze gender, racial, socio-economic stereotypes seen in popular culture through a variety of entertainment outlets, as well as compare and contrast novels that have been changed or altered in order to be adapted into film. Students will be expected to complete intensive reading assignments outside of the classroom. Assessments will be comprised of projects, essays, and differentiated presentations.

Political Science: Grades 10-12 - 0.5 credit (144)

The older you get, the more the government impacts your life. This course explains how the American system of government works, how it impacts your life, and how you can influence it. Topics covered include government institutions, public opinion, political parties, interest groups, elections, and voting.

American Military History: 0.5 credit (146)

Students interested in the American Revolution, the Civil War, World War II, and Vietnam War will enjoy this course. Each unit of study will focus on the soldiers who fought these wars, the commanders who led them, the weapons they used during them, and the strategies they employed to win them.

Economics: Grades 10-12 – 0.5 credit (147)

This will be an action-packed class that explores the concepts of economics in our everyday lives. Students will apply the concepts learned to different scenarios in class including projects, mysteries, and group activities. It will be a basic overview of microeconomic and macroeconomic principles as well as fiscal policy and economic theory. Students will compete using their economics knowledge with other students in the state through the Economics Challenge and the Stock Market Game.

AP Political Science: Grades 11- 12 – 1 credit (131)

Politics is all about —who gets, what, when and how? By analyzing the American Political System, students will gain a thorough understanding of how policy decisions are made and who benefits from them. Topics covered in this course will include Congress, the President, the Supreme Court, public opinion, political parties, elections and government spending. Preparing students for the U.S. Government and Politics AP Exam in May is the primary focus of this course. Therefore, students taking this course should seriously consider taking this exam. Those who score well on this exam may receive college credit. Students taking this course are required to complete a summer reading assignment that will be due on the first day of the school year.

AP Psychology: Grades 11- 12 – 1 credit (151)

AP Psychology has been designed to provide students a topical study of the main elements of content in Psychology that mirrors the format of the AP examination given in May of each year. The areas covered will include History, Methods, Biological Bases of Behavior, Sensation and Perception, Consciousness, Learning and Cognition, Motivation and Emotion, Personality, Testing and Individual Differences, Abnormal Psychology, Treatment and Social Psychology. Methods will include in-class demonstrations, labs, on-line research and hands-on examples.

Technology and Engineering

Courses provide a vast choice of challenging activities that involve both theory and actual "hands-on" experiences. Instruction is related to both personal and career interest in these areas. All students should try to schedule some of these courses during their high school career.

Materials I - Construction Technology: Grades 9-12 – 0.5 credit (601)

This course is designed to help students understand the basic concepts and principles of construction technology and home maintenance. Basic woodworking skills with the appreciation of workmanship, safe and proper use of hand and power tools, material selection, and assembly techniques will be covered. Through hands-on activities, students will apply problem-solving techniques to the planning, building, and servicing of projects and structures. A materials fee may be assessed for this class.

Materials II - Manufacturing Technology: 1 credit (602)

Prerequisite: Materials I

This course is designed to help students understand the basic concepts of converting raw materials into marketable goods. Students must work cooperatively with others to research and develop an idea, utilize problem-solving skills and mass-produce a product in a plant or factory-like setting. Learning experiences include alternative materials and processes, production techniques, industrial workforce needs, and consumer awareness. Students will also develop material skills and techniques through individual project requirements. Students will have an opportunity to apply CNC (computer numeric control) Lathe and CNC Mill technology through project completion and development. A materials fee may be assessed for this class.

Materials III – Materials and Processes: 1 Credit (603)

Prerequisite: Materials II

Students in Materials III will have an opportunity to fulfill advanced materials requirements through the construction of individual projects. Emphasis will be placed on planning and design, proper material selection, various assembly techniques, advanced machine use with regard to safety and cabinet construction. The caliber of projects will depend upon individual skills and abilities. Students will have an opportunity to apply CNC (computer numeric control) Lathe and CNC Mill technology through project completion and development. A materials fee may be assessed for this class.

Materials IV - Product Development: 1 Credit (604)

Prerequisite: Materials III

Students in Materials IV will have an opportunity to fulfill advanced materials requirements such as: Raised Panel Doors, Dovetail Drawer Construction, Advanced Joinery, and Advanced Finishing and Refinishing Techniques through the hands-on construction of independent projects. Students will have an opportunity to apply CNC (computer numeric control) Lathe and CNC Mill technology through project completion and development. A materials fee may be assessed for this class.

Drafting and Design I: Grades 9-12 – 0.5 Credit (611)

Students in Drafting and Design I develop their ability to design, produce, and understand drawings. A variety of techniques are used to complete drawings including; sketching, hand drafting, and computer aided drafting. Students also complete several design projects including the design of a miniature golf course or board game on the computer and the design/construction of a penny lift or marble roller. Students will be exposed to many related career areas including; drafting, architecture, engineering, interior design, commercial art, technical illustration, computer graphics, animation and more. Students interested in computers are encouraged to consider this course.

Drafting and Design II: 1 Credit (612)

Prerequisite: Drafting & Design I or Introduction to Engineering and Design

This course builds on the basic concepts and skills developed in Drafting and Design I. All areas are received with special emphasis placed on computer aided drafting with AutoCAD. Students will complete several design projects that further develop skills learned in Drafting and Design I.

Drafting and Design III: 1 Credit (613)

Prerequisite: Drafting & Design II or Introduction to Engineering and Design

Students in Drafting and Design III focus on two major areas of study, engineering design and computer aided drafting. The engineering design process is used to develop projects from the brainstorming/sketching stage to the prototyping stage. Some prototypes will be produced using our computerized laser cutter and our 3D printer. Engineering Design Problems such as the TSA Technology Challenge and the Dimension Extreme Redesign Competition are also developed. An in depth knowledge of Autodesk Inventor will be gained through the production of working drawings.

Drafting and Design IV: 1 credit (619)

Prerequisite: Drafting & Design III

Drafting and Design IV is a course for students interested in pursuing engineering or any other mechanically oriented career. Students with an interest in advanced computer applications would also find this class beneficial. Students will pursue specific areas of interest to complete individualized projects.

Architecture I: 1 credit (618)

Prerequisite: Drafting, Design I

In Architecture I students will design and complete a set of working drawings for a Dream House. Upon completion of the plans students will build a model of the house and estimate construction costs for the house were it to be built. You must have successfully completed Drafting and Design I to take this course.

Architecture II: 1 credit (620)

Prerequisite: Architecture I or Civil Engineering and Architecture

In Architecture II students will design and complete working drawings for both commercial and residential building projects. Students will experience many areas of building project design including site work, structural design, mechanical systems, electrical plans, and plumbing plans. You must have successfully completed Architecture I or Civil Engineering and Architecture to take this course.

Technical Illustration I: 1 credit (616)

Prerequisite: Drafting & Design II or Art II

Technical Illustration I is an exploratory course in which students will apply the skills and knowledge gained through a study of illustration styles and techniques to complete illustration projects both by hand and computer applications. Hand applications include; airbrush, pen and ink, colored pencil, and mixed media. Computer applications include; scanning, digital photography, 2D and 3D animation, and computer generated graphics. Projects include: display illustrations, music CD covers, movie posters, signs, etc. A materials fee may be assessed for this class.

Technical Illustration II: 1 credit (617)

Prerequisite: Technical Illustration I

Technical Illustration II builds on the skills gained in Technical Illustration I in order to develop more advanced projects. Students will complete independent projects and produce a compact disc portfolio of their work. A materials fee may be assessed for this class.

Power Technology I: Grades 9-12 – 0.5 credit (621)

Power Technology I is an exploratory hands-on course. Principles of land, air, and sea transportation are studied through the design, prototyping, and testing of mousetrap powered vehicles, water bottle rockets, and air powered boats. Principles of energy and power are studied through the construction and testing of an electronic based project, the FM Transmitter. The learning outcomes are obtained through this variety of relevant, applied project based activities. Furthermore, these activities and projects provide students with enhanced transferrable knowledge and skills in the areas of problem solving, critical thinking, and improving creativity. The objectives achieved through the completion of this course are necessary in today's competitive world of technology, business, and entertainment, and are designed for all students, not only those who plan to attend technical and/or engineering programs beyond high school.

Power Technology II: 1 credit (622)

Prerequisite: Power Technology I or POE (or written approved from Mr. Joy)

Power Technology II is an advanced, practical, hands-on course. Principles of energy conversion, research and construction techniques are learned through the design and prototyping of a CO₂ powered crash test vehicle. Principles of power and energy are studied through the design and creation of an advanced electronics project; a high powered strobe light with an original unique enclosure. Advanced critical thinking, problem solving, and precision measurement skills are furthered through the introduction of precision machining (combination brass and plastic mallet) and welding overview. The learning outcomes are obtained through this variety of relevant, applied project based activities. Furthermore, these activities and projects provide students with enhanced transferrable knowledge and skills in the areas of problem solving, critical thinking, and improving creativity. The objectives achieved through the completion of this course are necessary in today's competitive world of technology, business, and entertainment, and will be helpful for all students, not only those who plan to attend technical and/or engineering programs beyond high school.

Power Technology III: 1 credit (623)

Prerequisite: Power Technology II (or written approved from Mr. Joy)

Power Technology III is an advanced, practical, hands-on course. Principles of energy, power, and transportation technologies are studied through the design, construction, and testing of an advanced robot (The Pit Boss) that operates on human controls via radio frequencies and autonomous controls via a programmable microcontroller (BOE-BOT and/or Arduino). The robotics also incorporates mechanical design (controls and transmission) and fabrication of a drive train incorporating electric motors, gears, pulleys, and an end effector/manipulator that includes pneumatics (air power). Furthermore, principles of energy and power are studied through applied problems regarding residential power wiring. The learning outcomes are obtained from a variety of relevant, applied project based activities advancing upon and applying knowledge and skills obtained in the previous courses. Furthermore, these activities and projects provide students with enhanced transferrable knowledge and skills in the areas of problem solving, critical thinking, and improving creativity. The learning objectives obtained through the completion of this course are necessary in today's competitive world of technology, business, and entertainment, and will be helpful for all students, not only those who plan to attend technical and/or engineering programs beyond high school.

Power Technology IV: 1 credit (624)

Prerequisite: Power Technology III (or written approved from Mr. Joy)

Power Technology IV is an advanced, practical, hands-on, research and development course. The experience provides students with enhanced transferrable knowledge and skills in the areas of R&D, problem solving, critical thinking, and improving creativity. The learning outcomes are obtained from the identification of a problem, research, design, prototyping, and communication of a relevant applied culminating project. This opportunity will challenge the students to advance upon and apply knowledge and skills obtained in the previous courses to choose a topic of study and become an expert in that area. Students will follow universally accepted, tried and true, Engineering Design Process to guide them.

Introduction to Visual Media: Grades 9-12 – 0.5 credit (641)

This area of technology deals with communication through printed, televised or computerized media. Students explore the fields of Advertising, Commercial Art and Design, Pinhole & Digital Photography, Graphic Design, Screen-Printing, Offset Lithography and Desktop Video Production to create artwork or solve design problems. The use of Adobe Creative Suite (Photoshop, Illustrator, InDesign) and the iLife suite of products will be introduced. Anyone interested in the aforementioned areas or learning how Apple works is encouraged to take this class. A materials fee may be assessed for this class.

Introduction to Traditional and Digital Photography: Grades 9-12 – 0.5 credit (642)

Recommendation: Student should have access to a 35mm camera and a digital camera.

This course is designed to expand skill growth through project development in visual media. Traditional black and white photography, 35mm SLR skills, darkroom procedures and print development will be covered. Digital photography will also be utilized for project development. The use of Adobe Creative Suite (Photoshop, Illustrator and InDesign) and the iLife suite of products will be introduced. A materials fee may be assessed for this class.

Advanced Traditional and Digital Photography: Grades 9-12 – 1.0 credit (645)

Prerequisite: Intro to Traditional & Digital Photography, or Concurrently Enrolled in AP Studio Art

This course will build on the composition skills previously learned and introduce new techniques to document or create each student's photographic vision of the world. Students will learn how to use advanced camera settings on both film and digital cameras. On the film side, various printing techniques will be used in the darkroom. On the digital side, both in-camera and in-computer processing techniques will be studied. We will print to various media from iMac computers. A materials fee will be assessed for this class.

Intermediate Visual Media: 1 credit (643)

Prerequisite: Introduction to Visual Media

This area of technology deals with communication through printed, televised or computerized media. Students explore the fields of Advertising, Commercial Art and Design, Pinhole & Digital Photography, Graphic Design, Screen-Printing, Offset Lithography and Desktop Video Production to create artwork or solve design problems. The use of Adobe Creative Suite (Photoshop, Illustrator, InDesign) and the iLife suite of products will be studied in depth. A materials fee may be assessed for this class.

Advanced Visual Media: 1 credit (644)

Prerequisite: Intermediate Visual Media or Traditional & Digital Photography

This class is intended for student directed in-depth study of visual media. The student, in conjunction with the teacher, will develop course work and projects. This is an ideal class to explore your individual interests in visual media and to create a digital portfolio to display your talents and abilities. A materials fee may be assessed for this class.

Project Lead the Way

PLTW Engineering is about applying engineering, science, math, and technology to solve complex, open-ended problems in a real-world context. Through an activity-, project-, and problem-based curriculum, PLTW students engage in problem solving, learn and apply the engineering design process, and use the same industry-leading technology and software as are used in the world's top companies. Even for students who do not plan to pursue engineering after high school, the PLTW Engineering program provides opportunities to develop highly transferable skills in collaboration, communication, and critical thinking, which are relevant for any coursework or career. Any PLTW course can be used as science elective credit.

Introduction to Engineering Design Honors: Grades 9-12 – 1 credit (590)

Recommendation: Student should have completed Algebra I with a B or higher.

This introductory course develops student problem solving skills, with emphasis placed upon the concept of developing a 3-D model or solid rendering of an object. Students focus on the application of visualization processes and tools provided by modern, state-of-the-art computer hardware and software. This modern computer-based process replaces traditional hand drawing methods. The course will emphasize the design development process of a product and how a model of that product is produced, analyzed, and evaluated using a Computer Aided Design System. Various design applications will be explored with discussion of possible career opportunities.

Principles of Engineering Honors: Grades 9-12 – 1 credit (591)

Recommendation: Student should have completed Algebra I with a B or higher.

Principles of Engineering is a broad-based survey course designed to help students understand the field of engineering and engineering technology and its career possibilities. Students will develop engineering problem solving skills that are involved in post-secondary programs and engineering careers. They will explore various engineering systems and manufacturing processes. They will also learn how engineers address concerns about the social and political consequences of technological change. The main purpose of this course is to experience through theory and hands-on problem solving activities what engineering is all about and to answer the question, is a career in engineering or engineering technology for me?

Computer Integrated Manufacturing Honors: Grades 10-12 – 1 credit (592)

Recommendation: Student should have completed Principles of Engineering or Intro to Engineering Design. Teacher permission may be granted in special circumstances to students showing special interest and aptitude.

This course applies principles of robotics and automation. The course builds on computer solid modeling skills developed in Introduction to Engineering Design and Design and Drawing for Production. Students use CNC equipment to produce actual models of their three-dimensional designs. Fundamental concepts of robotics used in automated manufacturing and design analysis are included.

Digital Electronics Honors: Grades 10-12 – 1 credit (593)

Recommendation: Student should have completed Principles of Engineering or Intro to Engineering Design. Teacher permission may be granted in special circumstances to students showing special interest and aptitude.

This is a course in applied logic that encompasses the application of electronic circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits, devices, and electronic projects.

Civil Engineering and Architecture Honors: Grades 10-12 – 1 credit (594)

Recommendation: Student should have completed Principles of Engineering or Intro to Engineering Design. Teacher permission may be granted in special circumstances to students showing special interest and aptitude.

This course provides an overview of the fields of Civil Engineering and Architecture, while emphasizing the interrelationship and dependence of both fields on each other. Students use state of the art software to solve real world problems and communicate solutions to hands-on projects and activities. Topics covered include the roles of civil engineers and architects, project planning, site planning, building design, project documentation and presentation. Student design projects include playhouses, Habitat for Humanity Homes, and team design projects such as a fire station, restaurants, sports stadiums, shopping centers, and other commercial or civic structures.

Biotechnology Honors: Grades 10-12 – 1 credit (596)

Recommendation: Student should have completed Principles of Engineering or Intro to Engineering Design. Teacher permission may be granted in special circumstances to students showing special interest and aptitude.

The major focus of this course is to expose students to the diverse fields of biotechnology including biomedical engineering, molecular genetics, bioprocess engineering, and agricultural and environmental engineering. Lessons engage students in engineering design problems related to biomechanics, cardiovascular engineering, genetic engineering, agricultural biotechnology, tissue engineering, biomedical devices, forensics and bioethics. Students in this course apply biological and engineering concepts to design materials and processes that directly measure, repair, improve and extend living systems.

Engineering Design and Development Honors: Grades 11-12 – 1 credit (595)

Recommendation: Student should have completed Principles of Engineering, Intro to Engineering Design, Digital Electronics, AND either Civil Engineering and Architecture or Computer Integrated Manufacturing. Teacher permission may be granted in special circumstances to students showing special interest and aptitude.

This is an engineering research course in which students work in teams to research, design and construct a solution to an open-ended engineering problem. Students apply principles developed in four preceding required courses and are guided by a community mentor. They must present progress reports, submit a final written report and defend their solutions to a panel of outside reviewers at the end of the school year.

Video Production

Video Production I: Grades 9-12 – 0.5 credit (520)

This course provides an overview of the skills and concepts needed to create compelling and informative video. Students become familiar with all of the basic aspects of video production in its three stages: pre-production, production and post-production. Working both individually and in groups, students will complete various projects while gaining an understanding of the Macintosh computer, digital cameras and cinematography. Students will also critique film in an effort to understand this powerful media. This course serves as the foundation for all other video courses and is an excellent introduction to media literacy.

Video Production II: Grades 9-12 – 1 credit (521)

Prerequisite: Fundamentals of Video Production I

This course continues the study of video production. Students will continue to hone their understanding of concept creation, storyboarding, camera techniques such as pull focus, tracking and pov, and advanced editing skills using Final Cut Pro and introducing After Effects. Comprehensive analysis and study of movie clips and short film will help students in their creations. Students will work individually and in groups to create a variety of projects based on societal issues and student interests. Students must be able to work independently and outside of class.

Video Production III: Grades 10-12 – 1 credit (522)

Prerequisite: Video Production II

Students will create video focusing on the skills of storytelling using special effects, music, natural sound and editing techniques. Individual choice in projects will help students narrow their area of interest and develop the tools needed to get people to invest in their ideas. In depth analysis of the work of other filmmakers will help budding directors and cinematographers gain ideas and hone their craft. Students will produce pieces by working through each stage of production including; concept formation, screenwriting, casting, filming, editing, and distribution. Students must be able to work independently and outside of class.

Video Production IV: Grades 10-12 – 1 credit (523)

Prerequisite: Video Production III

This is the culminating course in the study of video production. Students will be asked to design their own projects and lead the production team in producing them. They will also create a portfolio of work to illustrate proficiency in the field. This is a necessary element for film school and for the job market. Students must be able to work independently and outside of class.

Broadcast Journalism I & II: Grades 9-12 – 1 credit each (524, 525)

These courses are both an introduction to the field of broadcasting and a production class that creates a daily live news program for Twin Valley. Part of the class will consist of analyzing the television news media including the history, ethics, style, and composition of a news program. Students will then learn hands on as they create projects to share with the student body. The second goal of the program encompasses mastering every aspect of production from working the cameras to news gathering to lighting and sound requirements. In these first two classes students will learn the basics of equipment and content creation using a host of media creation programs.

Broadcast Journalism III & IV: Grades 10-12 – 1 credit (526, 527)

Prerequisite: Broadcast Journalism II

In these upper level courses, students will build on the concepts learned in level one and two and learn how to produce and direct a news program, design a show and direct the crew. Student must demonstrate understanding of all the skills necessary for video production and studio production before they proceed. Students will also learn leadership and communication skills needed in the workplace. As a capstone project, level 4 students will create a portfolio of their work.

Film Criticism and Appreciation: Grades 9-12 – 1 credit (519)

This course will focus on developing an understanding of the language of film. Students will analyze the media and our culture by looking through that lens in terms of story design and structure, character development, shot choices and camera angles as well as the components of sound production. The focus will be on how the media in advertising, documentary and narrative film elicits an emotional response by combining the elements of pictures, dialogue and sound. This course serves as an excellent companion study for students in video production classes.

Animation and Graphic Design I: Grades 9-12 – 0.5 credit (528)

This class is designed to give you an introduction to learning how to put art in motion. Throughout the course we'll explore the evolution of animation from flipbooks to computer generated animation. Combining techniques that are both traditional and cutting edge, the class will look at creating frame-by-frame animations that result from the study of movement, storytelling, and lighting. We will also begin to look at Photoshop and Wacom tablets as a method for combining images and/or words to create visual representations of ideas.

Animation and Graphic Design II: Grades 9-12 – 0.5 credit (531)

This class is designed to build on your experiences from Animation and Graphic Design Part I. Throughout this course we will continue to focus on bringing art to life. We will continue to utilize and expand on traditional techniques such as stop-motion, but also experiment with creating computer generated animations using programs such as Flash, Photoshop, and After Effects.

Visual Arts

Art surrounds us and can be found in every area of our lives. The art program is designed to encourage every student to appreciate art as well as lay a firm foundation for those who may plan to continue in some area of art after completing high school.

Art I: Grades 9-12 – 0.5 credit (500)

This is an introductory course that provides students with the opportunity to take an in-depth look at the foundations of art. The class is designed for the student who would like to experience many different processes rather than specializing in one area. This class will provide students with the tools to communicate their thoughts and ideas visually. Emphasis is placed on developing critical thinking skills required in art making. A materials fee may be assessed for this class.

Art II: Grades 9-12 – 0.5 credit (501)

Prerequisite: Art I

This class will allow students to use a variety of materials and techniques similar to Art I with an emphasis being placed on developing the combination of critical thinking and artistic skill required for art making. This course will still give students an opportunity to work both in two dimension and three dimension design. A materials fee may be assessed for this class.

Art III: Grades 9-12 – 1 credit (502)

Prerequisite: Art I & Art II

In this course students refine and build on skills that they learned in Art I and Art II. Emphasis is placed on the study of techniques, media, and approaches to art. Projects address conceptual problems and emphasize the development of problem solving abilities. By sharing their thoughts, ideas, and work, students are given the opportunity to build a more thoughtful community of learners. A materials fee may be assessed for this class.

Art IV: Grades 10-12 – 1 credit (503)

Prerequisite: Art I, II, & III

In this class emphasis is placed on strengthening students' established skills from Art I and Art II. Focus is placed on developing individual artistic styles by looking at contemporary artists. Projects are in-depth explorations that give students the opportunity to apply foundational skills while furthering their artistic voices. A materials fee may be assessed for this class.

Ceramics & Sculpture I: Grades 9-12 – 0.5 credit (504)

Prerequisite: Art I; Seniors will be granted admission without Art I requirement.

Students will explore clay through construction of coil, slab, and pinch techniques. Skills and techniques are emphasized through guided practice and experimentation. Good design is approached by discussion of form, function, glaze decoration, and texture. While studio work is the focus of this course, there will be an emphasis on problem solving skills, craftsmanship, and critical analysis. A \$25.00 materials fee will be assessed for this class.

Ceramics & Sculpture II: Grades 9-12 – 0.5 credit (505)

Prerequisite: Art I and Ceramics & Sculpture I

This course continues the exploration of clay fabrication techniques, with a major emphasis and focus on proper wheel throwing techniques. Good design is approached by discussion of form, function, glaze decoration, and texture. While studio work is the focus of this course, there will be an emphasis on problem solving skills, craftsmanship, and critical analysis. A \$25.00 materials fee will be assessed for this class.

Ceramics & Sculpture III: Grades 9-12 – 1 credit (508)

Prerequisite: Art I and Ceramics& Sculpture II

Students will continue to explore clay through construction of hand building and wheel throwing techniques. Students will have more artistic freedoms as they improve their skills with clay, which will lead to more advanced ideas and products. Skills and techniques will be emphasized through good design. Good design is approached by discussion of form, function, glaze decoration, and texture. While studio work is the focus of this course, there will be an emphasis on problem solving skills, craftsmanship, and critical analysis. A \$25.00 materials fee will be assessed for this class.

Drawing & Painting I: Grades 10-12 – 1 credit (509)

Prerequisite: Art I and Art II

Students will explore classical and expressive drawing through guided practice and experimentation with a wide variety of drawing media and artistic styles. Students will learn to work with the core art elements and design principles in studio work. Focus for the course will be centered on studio work, aesthetics understanding, art history, and critical analysis. The course will introduce students to basic techniques in watercolor and acrylic mediums through work in landscapes, abstraction, collage, still life, and individual exploration. A materials fee may be assessed for this class.

AP Studio – 2D Portfolio: Grade 12 – 1 credit (510)

Prerequisite: Art I, II, III, IV, and Drawing and Painting. Teacher recommendation suggested.

Students will be required to demonstrate mastery of 2D design through and 2D medium or process. Any work that makes use of other artists' work (including photographs) and or published images must show substantial and significant work. A minimum of 6 hours per week outside of class is required for a fully developed piece of art work. A total of 26 fully developed concentration pieces will be required for submission and review by the AP review board. This class is designed for the serious art student who is self-motivated and has the drive to explore a higher level of art. A materials fee may be assessed for this class.

Repurposed Design: Grades 9-12 1 credit (511)

Prerequisite: Art I and Art II

Forget recycling; try up-cycling. Repurposed design combined with craft design gives old and new items a new lease on art. Through the use of wood, metal, fiber, ceramics and many more nontraditional materials students will create 3D and 2D art creations. This course is for the student who wants to think outside the box and create crafty art with current newly taught skills.

Word Language

Because there is an ever-growing need for world language proficiency in the job market, students are encouraged to participate in a world language. Students who are motivated, diligent in performing their work, and determined to learn a world language can do so successfully. Although at least two years of world language study is strongly recommended for all academic students, it should be noted that many colleges are requiring 2-4 years of study of the same language prior to college admission.

French I: 1 credit (045)

Students learn to understand, speak, read and write basic French by doing. At this beginning level, students deal with topics such as home, school, family, sports, and travel. Students practice all aspects of the language using interviews, projects, orals, written conversations, various games and traditional songs.

French II: 1 credit (046)

French II continues all the goals of the beginning level. Students continue to study all the aspects of the language with more emphasis on grammar. Study topics include: weekend activities, meals, shopping, free time, sports, health, clothes, travel and vacation. Students will be introduced to reading for information and reading for pleasure in the French language.

French III: 1 credit (047)

French III is designed to gain fluency in the target language through continued exposure and use of the vocabulary and grammatical forms learned in previous levels. Emphasis is placed on vocabulary enrichment, development of reading comprehension, speaking and writing in the language. Various materials such as texts, films, literature selections, songs and the internet will be used to improve all aspects of the language. Students will learn about French-speaking countries throughout the world.

French IV Honors: 1 credit (048)

The fourth year level continues to emphasize fluency in the target language. A wide variety of materials beyond the textbook such as authentic literature selections, songs, films and the internet are used to improve listening, reading and writing skills. Students will participate in interviews, skits and discussions in the target language. They will continue to practice grammar that will allow them to communicate in the present, the future, the past and the subjunctive mood.

German I-A: Grades 9-12 – 0.5 credit (080)

This is an introductory course that provides students the opportunity to explore spoken German in the context of everyday life. Students learn to express themselves and to converse with one another about weather, time, free time, and school using basic vocabulary. Culture is studied through learning the customs, holidays, and daily routines of Germany, Switzerland, and Austria.

German I-B: Grade 9-12 – 0.5 credit (081)

This class provides a solid foundation in the study of German by introducing writing and reading in German at a basic level. Students are given the opportunity to continue exploring spoken German as a step toward mastering the language. The culture of Germany and other German-speaking countries is studied through projects, conversations, and role-plays.

German II: 1 credit (082)

Emphasis on this level will be placed on speaking, writing and reading German. Students will be exposed to readings about culture and daily routine in Germany and will concentrate on vocabulary acquisition. Short oral and written reports will be used to reinforce new and reviewed grammatical skills. An increase of listening activities will be introduced. If you have a minimum of a C average and an enjoyment and desire to further your language mastery, this course is highly recommended.

German III: 1 credit (083)

The course consists of dialogues concerning various aspects of daily life in Germany and longer articles including those about history, music, literature and people of Germany. Although speaking, reading, and writing are emphasized on this level, students will continue to reinforce previously learned grammatical concepts while being introduced to others. Short compositions and translations will be prepared by the students.

German IV Honors: 1 credit (084)

This fourth year level is designed for students who desire to improve and combine foreign language skills studied during the first three years of German. Listening, speaking, reading and writing will be stressed, with particular emphasis on speaking. Students will write and perform their own skits, engage in conversation, and study German culture and history.

AP German V: 1 credit (085)

Components of AP German V include perfecting basic conversation skills for everyday/authentic experiences, basic travel capability, circumlocution, reading small novellas, news media, comprehending broadcast media, and written ability with every day forms and business correspondence. German culture and history will be researched, discussed and presented through written assignments. Cultural study will focus on art, music and film. Historical study will focus on the 19th and 20th centuries, as well as Germany's current and future social trends.

Spanish I-A: Grades 9-12 – 0.5 Credit (090)

This is an introductory course that provides students the opportunity to explore spoken Spanish in the context of everyday life. Students learn to express themselves and to converse with one another about weather, time, free time, and school using basic vocabulary. Culture is studied through learning the customs, holidays, and daily routines of Spain, Mexico, and other Spanish-speaking countries.

Spanish I-B: Grades 9-12 – 0.5 credit (091)

This class provides a solid foundation in the study of Spanish by introducing writing and reading in Spanish at a basic level. Students are given the opportunity to continue exploring spoken Spanish as a step toward mastering the language. The culture of Spain, Mexico, and other Spanish-speaking countries is studied through projects, conversations, and role-plays.

Spanish II: 1 credit (092)

In level II, students continue to master the foundation of the Spanish language. This course places more emphasis on the structure of the language and the development of reading and writing skills. The text, songs, films and the internet are some of the materials used to improve these skills. Cultural study expands on previous knowledge of Spain and Mexico and includes the Spanish-speaking countries in Central and South America as well as the Caribbean.

Spanish III: 1 credit (093)

The objective of this course is to build on previous levels of Spanish and to gain fluency in the language. Emphasis is placed on vocabulary enrichment and on the development of reading and writing strategies. Students are exposed to authentic literature. Various methods are used to build students' ability for self-expression in communicating events in the past, present and the future.

Spanish IV Honors: 1 credit (094)

A wide variety of materials beyond the textbook such as authentic literature selections, newspaper articles, songs and the Internet are used to improve listening, reading and writing skills. Emphasis is also placed upon oral fluency. Interviewing and storytelling activities are used to help students acquire and improve speaking skills. Discussion of contemporary issues and current events is encouraged in the target language. Students will continue to practice grammar that allows them to communicate events in the present, future and the past as well as delivering commands and understanding the subjunctive mood.

AP Spanish, Language, and Culture: 1 credit (095)

An AP Spanish Language course is designed to be comparable to a third year level college Spanish language course. It emphasizes the use of Spanish for active communication, aural/oral skills, reading comprehension, grammar, and composition. The course seeks to develop language skills that are useful in themselves and that can be applied to various activities and disciplines. It will also include extensive training in the organization and writing of compositions. This course is taught entirely in Spanish and reflects the guidelines outlined in the College Board Spanish AP course description.

Spanish Literature Honors: 1 credit (096)

Spanish Literature is an advanced course designed to be the final step of preparation for advanced Spanish study at the university level. Students read, analyze, discuss, compare, and write extensively on literature selections. This course also maintains fluency and hones the skills of listening, speaking, reading, and writing. The literature prompts the refinement of vocabulary and grammar structures. Students enrolled in this course have acquired an advanced understanding of structures with general proficiency. This course is taught entirely in Spanish.

Chinese I: 1 credit (061)**Activity fee required for iPad insurance**

This course is a practical approach to learning to speak and write Chinese by exploring everyday life in China. Students learn to converse about topics that are relevant to their lives. The students will converse on the following themes: greetings, school, dates, nationality, family, and food. Although the class emphasizes conversation, students will learn to write Chinese characters and type in Chinese. Class is taught via distance learning in association with the Berks County Intermediate Unit.

Chinese II: 1 credit (062)**Activity fee required for iPad insurance**

Chinese II builds on the themes from Chinese I. Students will expand their ability to communicate in Chinese on the following topics: clothing, physical descriptions, sports, pets, directions for getting to places, weather, and comparisons. In addition to practical conversation and listening activities, students will be introduced to common Chinese idioms. Short oral and written reports will be used to reinforce new and reviewed grammatical skills. If you have a minimum of a C average and desire to further your language mastery, this course is recommended. Classes are taught via distance learning in association with the Berks County Intermediate Unit.

Chinese III: 1 credit (063)**Activity fee required for iPad insurance**

This course will build on the themes and topics from Chinese II. Students will expand their conversation and writing skills to include further topics such as: daily activities, classes, visiting people in their homes, calling/texting people in order to make appointments to meet at various places (like the zoo), and ordering in a Chinese restaurant. Students will develop a deeper understanding of radicals and learn to use the Chinese dictionary. Students will use oral reports and role play to further enhance their speaking skills. Classes are taught via distance learning in association with the Berks County Intermediate Unit.

Chinese IV Honors: 1 credit (064)**Activity fee required for iPad insurance**

A wide variety of materials beyond the textbook such as authentic literature selections, newspaper articles, songs and the internet are used to improve listening, reading and writing skills. Emphasis is also placed on oral fluency. Interviewing and storytelling activities are used to help students acquire and improve speaking skills. Discussion of contemporary issues and current events are encouraged in the target language. Students will continue to practice grammar that allows them to communicate events in the past, present and future. Classes are taught via distance learning in association with the Berks County Intermediate Unit.

Chinese V Honors: 1 credit (065)**Activity fee required for iPad insurance**

Components of Chinese V include perfecting basic conversation skills for everyday authentic experiences, basic travel capability, circumlocution, reading small novellas, news media, comprehending broadcast media and written ability with every day forms and business correspondence. Chinese culture and history will be researched and discussed and presented through written and oral assignments. Cultural study will focus on art, music and film. Historical study will focus on the 19th and 20th centuries as well as China's current and future social trends. Classes are taught via distance learning in association with the Berks County Intermediate Unit.

Berks Career & Technology Center

All technical center electives are worth three (3) credits. Students choose one (1) area of specialization. Students enrolled in BCTC will be waived 0.5 PE credits and 1.0 Science credit. Students enrolled at BCTC for four (4) years also have the 0.5 Wellness requirement waived.

Advertising Art & Design Technology (903)

Automotive Collision Repair Technology (901)

Automotive Technology (904)

Building Construction Occupations (907)

Cabinetmaking (910)

Carpentry (913)

Communication Media Technology (917)

Cosmetology (931)

Culinary Arts (932)

Dental Occupations (937)

Diesel Technology (940)

Drafting Design Technology (943)

Early Childhood Education (970)

Electrical Occupations (946)

Electronic Engineering Technology (949)

Graphic Imaging Technology (920)

Healthcare Information Technology (923)

Health Occupations (952)

Health Related Technology (955)

**Heating, Ventilation, Air Conditioning
Refrigeration (HVAC) (958)**

Heavy Equipment Technology (959)

Horticulture (961)

IT Networking (926)

IT Programming (928)

Masonry (967)

Mechatronics Engineering Technology (968)

Medical Health Professions (951) – Seniors Only

Painting and Decorating (973)

Photo Imaging Technology (919)

Plumbing and Heating (976)

Precision/Computerized Machining Tech (964)

Protective Services (983)

Recreational & Power Equip. Tech. (985)

Robotics and Automation Technology (988)

Service Occupations (989)

Technology Based Entrepreneurship (992)

Welding Technology (990)

Career Pathways

Preparing students to enter both post-secondary education and the work force is an important goal of the Twin Valley School District. With new technologies, emerging markets and constant changes in the work place, today's students must be prepared for both a career field and a lifetime of learning. Career pathways were created to support students in planning properly throughout the high school years when choosing elective courses. These are meant to be a guide. Students are not locked in to any career pathway but may choose elective courses from any pathway as long as prerequisites are met.

Career Clusters and Career Pathways

Course alignment charts were created to assist students in navigating the high school course offerings and how they relate to careers. There are six career clusters identified under two larger headings of STEM (Science, Technology, Engineering, and Math) and Arts & Humanities in the Twin Valley High School course offerings. Under each career cluster there are multiple career pathways with corresponding course suggestions.

How it Works

Students should prepare an academic plan centered on a career goal and discuss that goal with parents and guidance counselors. Students can consult the suggested course alignment for each career area when planning and selecting courses throughout high school. Careful consideration should be given to elective courses that support the student's career goal and areas of interest. All students are encouraged to take advantage of the internship program in either their junior or senior year to experience a more in-depth workplace environment under the supervision of a skilled mentor.

STEM			Arts and Humanities		
Career Clusters					
Engineering and Industrial Technologies	Health and Medical Professions	Natural Resources and Environmental Sciences	Arts and Communications	Business/ Marketing/ Management	Community and Consumer Services
Career Pathways					
Engineering	Sports and Fitness	Agriculture, Food & Natural Resources	Performing Arts	Computer Sciences	International Relations
Industrial Technology	Medical Professions	Environmental and Earth Sciences	Art and Graphic Design	Finance and Accounting	Law and Government
			Journalism and Media	Business and Entrepreneurship	Education & Social Services

Career Pathways Model

		At Twin Valley		At BCTC
Career Cluster				
STEM Pathways				
Engineering and Industrial Technologies	Related Professional Careers:	Aviation, Computer Aided Productions and System Design, Engineering, Electrical, Computer Information Systems,	Related Technical Careers:	Computer Information Systems, Manufacturing, Heavy Construction, Environmental Technology, Manufacturing, Engines, Fuels, Service Manager
	Related Professional Careers:	Physical Therapist, Audiologist, Dentist, Radiologist, Veterinarian, Pharmacist, Athletic Trainer, Doctor, Nurse, Nutritionist	Related Technical Careers:	Technician-X-ray, Medical Assistant, LPN, Dental Hygienist, Paramedic, Occupational Therapy
	Related Professional Careers:	Biology, Marine Sciences, Environmental Sciences, Agricultural Sciences, Food Sciences	Related Technical Careers:	Florist, Landscape Designer, Environmental Technology, Surveyor, Park Ranger
	Related Professional Careers:	Technical Writing, Teacher, Editor, Journalist/Writer, Illustrator, Artist, Musician, Interpreter, Performing Arts, Web Page Developer	Related Technical Careers:	Photography, Print Production, Advertising, Cabinet Making, TV Production, Performing Arts, Commercial Art
Arts and Humanities Pathways				
Business/ Marketing/ Management	Related Professional Careers:	Accountant, Finance/Banking, Sales, Marketing, Stocks and Bonds, Law, Insurance, Hotel and Restaurant Management, Teacher, Economics Business Administration	Related Technical Careers:	Secretary, Receptionist, Finance-Teller, Real Estate, Retail Management, Telecommunications, Legal Assistant, Data Processing
	Related Professional Careers:	Public Relations, Caseworker, Child Protective Services, Counselor, Law Enforcement, Justice Services, Lawyer, Criminal Justice Services, Sociologist, Psychologist, Psychiatrist, Clergy, Military	Related Technical Careers:	Hospitality and recreation, Travel Agent, Culinary arts, Child Care, Nanny, Maintenance, Cosmetology, Firefighter, Corrections Officer, Teacher's Aide
	Programs:	Culinary Arts, Service Occupations, Cosmetology, Early Childhood Education, Protective Services	Programs:	Information Technology-Programming, Information Technology-Networking, Technology Based Entrepreneurship
Community and Consumer Services	Related Professional Careers:	Public Relations, Caseworker, Child Protective Services, Counselor, Law Enforcement, Justice Services, Lawyer, Criminal Justice Services, Sociologist, Psychologist, Psychiatrist, Clergy, Military	Related Technical Careers:	Hospitality and recreation, Travel Agent, Culinary arts, Child Care, Nanny, Maintenance, Cosmetology, Firefighter, Corrections Officer, Teacher's Aide
	Programs:	Culinary Arts, Service Occupations, Cosmetology, Early Childhood Education, Protective Services	Programs:	Information Technology-Programming, Information Technology-Networking, Technology Based Entrepreneurship

Career Pathways Model

Engineering and Industrial Technologies Career Cluster				
<i>Related Careers: Aviation, Engineering, Architect, Heavy Construction, Engines, Fuel Technology, Carpentry, Computer Integrated Manufacturing</i>				
Grade 9	Grade 10	Grade 11	Grade 12	
Required Courses Math English Science Social Studies Wellness	Required Courses Math English Science Social Studies Health Physical Education	Required Courses Math English Science Social Studies Physical Education	Required Courses Math English Science Social Studies	
Engineering Pathway				
Introduction to Engineering Design Principles of Engineering	Digital Electronics Computer Integrated Manufacturing	Biotechnology Civil Engineering and Architecture Economics AP Calculus AB Chemistry II Physics II Internship	Engineering Design and Development AP Calculus BC AP Chemistry AP Physics AP Statistics Internship	
Industrial Technology Pathway				
Drafting and Design I Materials I Power Tech I	Drafting and Design II Materials II Power Tech II Architecture I Technical Illustration I	Drafting and Design III Materials III Power Tech III Architecture II Physics II Technical Illustration II Internship	Drafting and Design IV Materials IV Power Tech IV AP Physics Internship	

Career Pathways Model

Health and Medical Professions Career Cluster				
<i>Related Careers: Medicine, Physical Therapist, Dentist, Pharmacist, X-ray Tech, Nurse, Dental Hygienist, Paramedic, Occupational Therapy, Veterinarian</i>				
Grade 9	Grade 10	Grade 11	Grade 12	
Required Courses Math English Science Social Studies Wellness	Required Courses Math English Science Social Studies Health Physical Education	Required Courses Math English Science Social Studies Physical Education	Required Courses Math English Science Social Studies	
Sports and Fitness Pathway				
	Tactical Approach to Invasion Games Aerobic Fitness	Sports and Entertainment Marketing Exercise Science I Physics II AP Chemistry Chemistry II	Sports History Exercise Science II AP Physics Human Anatomy & Physiology Internship	
Medical Professions Pathway				
World Language II	World Language III AP Chemistry	World Language IV Animal Science I AP Biology AP Psychology Chemistry II Sociology/Psychology AP Calculus AB	AP World Language Animal Science II Biotechnology Human Anatomy & Physiology Introduction to Forensic Science AP Chemistry Conflict Resolution AP Calculus BC AP Statistics	

Career Pathways Model

Natural Resources and Environmental Career Cluster			
<i>Related Careers: Biology, Marine Sciences, Florist, Landscape Designer, Environmental Technology, Forest Technology, Agricultural Science, Naturalist</i>			
Grade 9	Grade 10	Grade 11	Grade 12
Required Courses Math English Science Social Studies Wellness	Required Courses Math English Science Social Studies Health Physical Education	Required Courses Math English Science Social Studies Physical Education	Required Courses Math English Science Social Studies
Agriculture, Food & Natural Resources Pathway			
Agricultural Science	Horticultural Science I Animal Science I Aquatic Science I Natural Resources & Ecology	Horticultural Science II Animal Science II Aquatic Science II Chemistry II	Agriculture Leadership AP Chemistry Internship
Environmental and Earth Sciences Pathway			
Agricultural Science	Aquatic Science I Natural Resources & Ecology	Aquatic Science II Introduction to Astronomy Chemistry II	Physics II AP Chemistry Internship

Career Pathways Model

Arts and Communications Career Cluster				
<i>Related Careers: Technical Writing, Teacher, Editor, Publication Manager, Journalist, Illustrator, Artist, Musician, Performing Arts, Photographer</i>				
Grade 9	Grade 10	Grade 11	Grade 12	
Required Courses Math English Science Social Studies Wellness	Required Courses Math English Science Social Studies Health Physical Education	Required Courses Math English Science Social Studies Physical Education	Required Courses Math English Science Social Studies	
Performing Arts Pathway				
Band, Chorus, Orchestra Jazz/Marching Band Music Theory Materials I Beginning Guitar	Band, Chorus, Orchestra Jazz/Marching Band Music History & Appreciation Materials II Intermediate Guitar	Band, Chorus, Orchestra Jazz/Marching Band Music Keyboard Lab Materials III Creative Writing	Band, Chorus, Orchestra Jazz/Marching Band Materials IV History and the Media AP Music Theory	
Art and Graphic Design Pathway				
Art I Ceramics I Animation I Photography Introduction to Visual Media Drafting & Design I Materials I Web Design I	Art II Ceramics II Animation II Advanced Photography Intermediate Visual Media Drafting & Design II Architecture I Web Design II Technical Illustration I	Art III Ceramics III Drawing and Painting Advanced Visual Media Drafting & Design III Architecture II Technical Illustration II Yearbook I Fashion & Apparel	Art IV AP Art 2D Studio Ceramic Independent Study History and the Media Drafting and Design IV Repurposed Design Creative Writing Yearbook II Interior Design	
Journalism and Media Pathway				
Journalism I Broadcast Journalism I Video Production I	Journalism II Broadcast Journalism II Video Production II Sociology Film Criticism	Journalism III Broadcast Journalism III Video Production III Creative Writing History and the Media Conflict Resolution	Journalism IV Broadcast Journalism IV Video Production IV Holocaust Literature AP Political Science Internship	

Career Pathways Model

Business/Marketing/Management Career Cluster				
<i>Related Careers: Accountant, Marketing, Economics, Business, Investment & Brokerage, Retail Management, Sales, Real Estate, Banking, Computer Science</i>				
Grade 9	Grade 10	Grade 11	Grade 12	
Required Courses Math English Science Social Studies Wellness	Required Courses Math English Science Social Studies Health Physical Education	Required Courses Math English Science Social Studies Physical Education	Required Courses Math English Science Social Studies	
Computer Sciences Pathway				
World Language II Keyboarding/MSO Apps	World Language III Video Production Web Design and Development	World Language IV AP Calculus AB Computer Science I Internship	PLTW Digital Electronics AP Computer Science Principles AP Calculus BC AP Statistics Internship EFE	
Finance and Accounting Pathway				
World Language II Personal Finance	World Language III Accounting Principles Business Principles	World Language IV AP Calculus AB Advanced Accounting Economics Internship	AP Calculus BC AP Statistics Internship	
Business and Entrepreneurship Pathway				
World Language II Business Management Web Design and Development	World Language III Sports & Entertainment Marketing Accounting Principles Personal Finance	World Language IV Business Principles International Business AP Calculus AB AP English Language & Comp Economics Internship	AP World Language Entrepreneurship AP Calculus BC AP Statistics Internship	

Career Pathways Model

Community and Consumer Services Career Cluster

Related Careers: <i>Teacher, Public Relations, Caseworker, Child Protective Services, Military, Clergy, Psychologist, Counselor, Lawyer, Paralegal, Librarian, Law Enforcement, Travel, Culinary, Child Care, Maintenance, Firefighter, Corrections Officer, Teacher's Aide</i>				
Grade 9	Grade 10	Grade 11	Grade 12	
Required Courses Math English Science Social Studies Wellness	Required Courses Math English Science Social Studies Health Physical Education	Required Courses Math English Science Social Studies Physical Education	Required Courses Math English Science Social Studies	Required Courses Math English Science Social Studies
International Relations Pathway				
World Language II	World Language III AP US History	World Language IV Economics Holocaust Literature Conflict Resolution AP English Language & Comp	AP World Language AP Political Science American Military History Internship	
Law and Government Pathway				
World Language II	World Language III AP US History	World Language IV Economics Holocaust Literature Conflict Resolution AP English Language & Comp	AP World Language AP Political Science American Military History Introduction to Forensic Science Internship	
Education and Social Services Pathway				
World Language II Preparing for Parenthood Family and Consumer Science	World Language III Intro to Preschool Lab Chef's Corner	World Language IV Advanced Preschool Lab Culinary Arts Psychology Sociology AP English Language & Comp	AP World Language Preschool Advisor I & II Pastries and More AP Psychology Conflict Resolution Introduction to Forensic Science AP English Literature & Comp EFE/Internship	