

TITUSVILLE AREA SCHOOL DISTRICT



2025-2026

Student Scheduling Catalog

- A Comprehensive Course Scheduling Guide for Students and Parents
- Overview of the course scheduling process
- Complete course descriptions
- Suggested course of study sequences
- Course and credit requirements for graduation
- Career planning information

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Table of Contents

From the Principals	4
The Scheduling Process.....	5
Scheduling Conferences	5
Course Selection	6
Schedule Changes	6
Graduation Requirements	7
Quality Point Scale	9
Honors Program Criteria	10
Dual Enrollment Opportunity.....	11
College Course/Credit Opportunities.....	11
Career Education Programs	12
Cooperative Education Program	12
Titusville Rockets Manufacturing.....	12
Career Planning	13
NCAA/NAIA Eligibility	14
College & University Preparatory Program.....	17
English Course Descriptions.....	18
Social Studies Course Descriptions.....	21
Science Course Descriptions.....	26
Mathematics Course Descriptions	29
Business, Computer, & Info Technology Course Descriptions	32
World Languages Course Descriptions	36
Music Course Descriptions	39
Art Course Descriptions.....	42
Early Childhood Education Program.....	45
Family & Consumer Science Course Descriptions.....	46
Service-Oriented Elective Course Descriptions	48
Technology Education Course Descriptions.....	49
Health and Physical Education Course Descriptions.....	51
Venango Technology Center	52
Venango Technology Center Course Descriptions	55

From the Principals

This catalog is designed to assist you in selecting courses that meet the requirements for your course of study. We hope you will find the information contained in this catalog to be a helpful guide when choosing appropriate courses for next school year.

Scheduling is critical for students at the secondary level since it serves as a springboard for future educational and career plans. Your selection of a course of study and subjects should be based on your proven ability, interests, aptitudes, and personal goals.

Our school counseling department makes every effort to see that you are registered for the proper courses to ensure sufficient credits for graduation. Parents are invited to schedule a conference for their child with one of our counselors. However, each student should see that the quality and quantity of his credits are correct. Each parent and student have the responsibility to select courses that are within the student's ability and at the same time are challenging to him or her.

Please understand that course selections are often difficult to change once the master schedule has been created. The course selections you make now are considered definite and are not subject to change later, so please take time to make judicious and responsible decisions. If there is a justifiable need for a course change, guidelines for dropping and adding courses are also contained in this booklet. Parents and students should take the time to become acquainted with these policies.

If you or your student has any additional questions regarding the course selection process, please do not hesitate to contact us at 814-827-2715.



Philip Knapp
Principal



Crystal Gates
Assistant Principal

The Scheduling Process

The scheduling process is the shared responsibility of students, parents, teachers, counselors and administrators. All of them contribute ideas and information that result in effective educational programs for students. Since the students' educational programs have implications for post-high school education and eventual career choice, careful planning is required.

Counselors/Administrators assist students, parents, and teachers in developing a sound educational program that meets the students' needs.

Parents assist students in the selection process by discussing alternatives with them and by helping them to understand their individual strengths and weaknesses and set realistic goals.

Teachers are available to discuss the curriculum with students in an effort to provide understanding of specific course requirements. Teachers may be recommending that students take a particular course.

Students are encouraged to discuss course requests with their teachers before enrolling in classes so that they are provided with information about the courses that are available to them. They must choose those subjects that give them the knowledge and skills necessary for their current educational and career plans.

Scheduling Conferences

All students will receive course request information via class meetings. With the assistance of a school counselor, students will enter their course requests online during the school day. Students will be asked to select four alternate course requests in the event that their first choice is unavailable. Student course requests will be sent home with students for parents to review. Every effort will be made to include parents in the scheduling process. However, if we are unable to reach a parent, a schedule will be created for the student.

Course requests will be reviewed by the faculty and school counseling staff in order to assure proper placement in courses, including honors courses. Parents may schedule a parent conference in order to discuss any concerns or questions regarding course selection. The purpose of this appointment would be to review the student's career planning portfolio, enter course requests, and graduation status. Parents interested in attending their child's individual appointment, may contact the school counseling office secretary at 827-2715, ext. 1425 to schedule a convenient time.

Post Scheduling Information

After students have been pre-scheduled and have their course requests entered, their assigned counselor will review their course requests and any notes made during the conference to ensure that the proper courses are selected. If the counselors have a question, they will contact the student and/or parents, depending on the issue.

After all course requests have been entered and processed, students will be scheduled by grade level regardless of when they pre-scheduled their course requests.

Course Selection

Scheduling will be based upon an eight credit (seven credit Vo-Tech) year plus a directed learning period for non-vo-tech students. Directed learning is a teacher guided time when students may complete homework, research in library, make-up work, access tutoring and activities, etc. Vo-tech students will schedule four classes plus their respective vo-tech program.

Based on the student's course requests, decisions will be made about which courses will be scheduled. Low enrollment may cause a course to be deleted from the master schedule. Class size limit may require an adjustment in student course requests. Therefore, students should select alternate courses very carefully.

Schedule Changes

In most cases, we expect students to retain the class schedule that they have selected for the duration of the school year. However, situations may arise that do warrant some type of scheduling adjustment. Some valid reasons for a schedule change could include the following:

1. Completion or failure of a course through credit recovery.
2. A change in Course of Study (i.e. dropping from the Honors Program)
3. Enrollment in the Cooperative Education Program.
4. Reasons caused by some type of medical emergency or situation.
5. The course level is determined to be too difficult through a parent/teacher conference.
6. A schedule change needed in order to meet credit requirements for graduation.
7. Change in career plan.
8. Course cancellation due to lack of student enrollment.

PLEASE NOTE:

In many cases, schedule changes are not possible because of class size, master schedule conflicts, or other similar reasons.

All schedule changes taking place after school begins require the signature of all teachers involved with the change, the parents, and a building administrator and/or counselor.

There are two weeks to make a change without receiving a WF for the course on the transcript.

REMEMBER TO GIVE VERY SERIOUS CONSIDERATION TO YOUR COURSE SELECTIONS. THE SELECTIONS YOU MAKE ARE CONSIDERED DEFINITE AND ARE NOT SUBJECT TO CHANGE.

Graduation Requirements

In order to graduate from Titusville High School a student must meet the graduation requirements that have been set by the Titusville Area School Board of Directors. These graduation requirements are determined in part by the Chapter 4 Academic Standards established by the Commonwealth of Pennsylvania. It is the responsibility of the students to ensure that all graduation requirements are met. Be sure that you are in good standing with the number of credits you have earned, since **grade level does not indicate graduation date**. If students or parents have questions concerning graduation requirements, they should contact their school counselor.

Students who have successfully completed Algebra I, Algebra II, Geometry, Spanish I, and Spanish II during the middle grades will earn high school credit. These courses will appear on the high school transcript. However, in order for these courses to count toward NCAA/NAIA Eligibility, students must complete these credits during grades 9-12.

Titusville High School Graduation Requirements are as follows:

1. Students must earn the required number of credits for graduation as listed below:

CREDIT REQUIREMENTS FOR ALL GRADES

<u>Subject Areas</u>	<u>Credit Requirements</u>
English	4.00 credits
Social Studies*	4.00 credits (3.0 VT)
Math	3.00 credits
Science	3.00 credits
Wellness Ed	4.00 credits
Humanities	1.00 credit
Elective Courses	6.00 credits
	25.00 total credits
	(24.00 Vo-Tech)

*Half credit of the social studies requirements must include a Personal Finance and Economics course

2. FOR THE CLASSES OF 2023, AND BEYOND:

The use of Keystone Exams as a graduation requirement currently affects students graduating in the Spring of 2023 and beyond. Act 158 and Act 6 outline a statewide graduation requirement for all PA students graduating in 2023 and beyond. Although every student may not be required to score proficient on the Keystone Exams in order to graduate, all students are required to take the Keystone Exams. There are 5 “pathways” that students can take in order to fulfill the statewide requirements.

Pathway # 1: Keystone Proficiency - Completing and scoring at least 1500 (proficient or advanced) on each Keystone Exam - Algebra I, Literature, and Biology.

Pathway #2: Keystone Composite - Must earn a proficient score on at least one of the three exams. Can not earn a “Below Basic” score on any Keystone exam. Achieve a

combined score of at least 4452 on the Algebra I, Literature, and Biology Keystone Exams.

Pathway #3: Alternate Assessment - Achieve a passing grade (>60) in any course (Algebra I, IB, English 10, Biology) that the student did not achieve proficiency, AND one of the following:

- Attainment of an established score on an approved alternate assessment
 - SAT (1010)
 - PSAT (970)
 - ACT (21)
 - ASVAB (31)
- **For those not achieving proficient on their Algebra Keystone only-** Attainment of a 3 or higher on the Advanced Placement test for AP Computer Science Principles or AP Computer Science A
- Acceptance in an accredited 4-year nonprofit institution of higher education and evidence of the ability to enroll in college-level coursework.

Pathway #4: Evidence Based - Achieve a passing grade (>60) in any course (Algebra I, IB, English 10, Biology) that the student did not achieve proficiency, AND demonstration of **three pieces of evidence** consistent with the student's goals and career plans, including:

At least one of the following:

- For those who did not score proficient on Algebra Keystone: Attainment of a 3 or higher on the Advanced Placement Program Exam for AP Computer Science A or AP Computer Science Principles
- Acceptance to an accredited nonprofit institution of higher education **other than a 4-year institution** and evidence of the ability to enroll in college-level coursework;
- Attainment of an [industry-recognized credential](#); or
- Successful completion of a Dual Enrollment or postsecondary course; and

Plus - Two additional pieces of evidence, including one or more of the options listed above, or: satisfactory completion of a **service learning project**; attainment of a score of proficient or advanced on a **Keystone Exam**; a letter guaranteeing **full-time employment**; a certificate of successful completion of an **internship** or **cooperative education program**; or satisfactory compliance with the **NCAA's** core courses for college-bound student athletes with a minimum grade point average (GPA) of 2.0.

Pathway #5: CTE - Earning a passing grade on the courses associated with each Keystone Exam, and,

- Complete all local requirements for CTE Program & attain industry-based competency certification
- Pass the National Occupational Competency Testing Institute (NOCTI) or the National Institute of Metalworking Skills (NIMS) assessment in an approved Career and Technical Education concentration.

For further explanation of the CTE Pathway, please see PDE's [Act 6 guidance](#).

Quality Point Scale

The quality point scale system places emphasis on the actual percentage scored in the class. The higher percentages earn a higher quality point. Honors courses are weighted beginning at 70 percent. Both the regular and weighted course quality point scales are listed below.

THE QUALITY POINT SCALE USED FOR COURSES UNDER A PERCENTAGE GRADE SYSTEM		
Percentage Grade	Quality Point Scale Regular Course	Quality Point Scale Weighted Course
100	4.00	5.00
99	3.90	4.90
98	3.90	4.90
97	3.80	4.80
96	3.80	4.80
95	3.70	4.70
94	3.70	4.70
93	3.60	4.60
92	3.60	4.60
91	3.50	4.50
90	3.50	4.50
89	3.40	4.40
88	3.40	4.40
87	3.30	4.30
86	3.30	4.30
85	3.20	4.20
84	3.20	4.20
83	3.10	4.10
82	3.10	4.10
81	3.00	4.00
80	3.00	4.00
79	2.90	3.90
78	2.80	3.80
77	2.70	3.70
76	2.60	3.60
75	2.50	3.50
74	2.40	3.40
73	2.30	3.30
72	2.20	3.20
71	2.10	3.10
70	2.00	3.00
69	1.90	1.90
68	1.80	1.80
67	1.70	1.70
66	1.60	1.60
65	1.50	1.50
64	1.40	1.40
63	1.30	1.30
62	1.20	1.20
61	1.10	1.10
60	1.00	1.00
59 and below	0.00	0.00

For more information about our grading system please contact your school counselor or building principal.

The following courses qualify for weighted grade scale status:

Advanced Biology	AP Spanish
Advanced Chemistry	Honors American Cultures I
Chemistry	Honors American Cultures II
Physics I	Honors US & The World
Physics II	Honors American Government
Advanced Math	Honors Personal Finance and Economics
PreCalculus	AP European History
Calculus	Honors English
French IV-subject to availability	AP Computer Science Principle
Spanish IV-subject to availability	AP Computer Science A

High School Class Rank

To be eligible for inclusion in the high school class rank calculation, students must meet the following criteria:

1. Students must complete at least 75% of the THS graduation credit requirements at a public or private school setting by the end of their senior year.
2. Class rank will be calculated based on coursework completed through the school year when all graduation requirements have been fulfilled.
3. Only high school credits completed in grades 9-12 will be calculated into GPA and class rank.

This policy ensures fairness and consistency in the evaluation of academic performance at Titusville High School. Students transferring into the school district should consult their school counselor for further guidance on how their credits align with this policy.

Honors Program Criteria

For English and Social Studies programs, the criteria are as follows:

Students must have a 90% or better in their current class and their current teacher's recommendation. Students who do not attain this, and who still wish to enroll in the course, must go through the honors appeal process.

HONORS PROGRAM APPEAL PROCESS:

Any student who does not meet the criteria will have the request removed. If the student feels he or she should be eligible for the Honors course, they may begin the appeal process. The student must submit a letter to the high school principal requesting a meeting by June 30.

Requests to enter the honors program after the school year has started will follow the schedule change policy.

Dual Enrollment Opportunity

College in the High School – University of Pittsburgh at Bradford (UPB)

Titusville High School has partnered with The University of Pittsburgh at Bradford to offer entry-level college courses at THS. This gives students who meet Pitt at Bradford guidelines the opportunity to earn high school and college credit simultaneously, while becoming familiar with college-level academics. The courses are taught by THS teachers who have a master's degree or the master's equivalency and have been certified as adjunct faculty members by the university. The high school teachers give grades for the courses, which are based on assignments, quizzes and tests determined by both faculty members, and also by a final exam that is provided, by the university. Students who would like to obtain the college credit will pay a fee to The University of Pittsburgh at Bradford. The following chart aligns the THS course name and UPB course name for available courses.

Titusville High School Course Name	University of Pitt at Bradford Course Name
Academic Algebra II	MATH 0098 College Algebra II
Precalculus	MATH 0132 Precalculus
Calculus	MATH 0140 Calculus I
Microsoft Office	MIS 0103 Computer Applications for Management
Advanced Accounting	ACCT 0201 Financial Accounting Concepts
Computer Science II	CIST 0150 Fundamentals of Programming
Spanish III	SPAN 0201 Intermediate Spanish I
Advanced Biology	BIOL 0091 Concepts of Biology
Advanced Chemistry	CHEM 0089 Concepts of Chemistry
Physics II	PHYS 0103 Concepts of Modern Physics

College Course/Credit Opportunities

Titusville High School maintains agreements with colleges and universities that permit students to participate in college classes outside the school day. These institutions include PennWest University, Northern Pennsylvania Regional College (NPRC), Grove City College and University of Pittsburgh at Titusville. These institutions offer numerous courses for juniors and seniors during different academic terms.

Any credits earned through these agreements will be a college credit only and will not appear on the high school transcript. This opportunity will be at the expense of the parent. See your school counselor for more information.

Career Education Programs

At our high school we offer opportunities outside the classroom as well. Students can gain a better understanding of careers and workplace information. These programs include the following: Co-op Programs and Internship Programs through Titusville High School and the Venango Technology Center, Job Shadowing Program, Transition Program and Service Learning Program. If you are interested in any of these opportunities, see your school counselor. They can help you make plans or refer you to the career counselor for help.

Cooperative Education Program

The Cooperative Education program is available to seniors who meet the following criteria: fulfill their course requirements and are on track to graduate, maintain grades of C or higher in their classes, demonstrate good work habits and positive character, and attend school regularly.

The goal of the Cooperative Education Program is to help students begin to develop a “professional attitude”, which determines how you look, work, and interact with other people; and to be enthusiastic, mature, competent, confident, cooperative, reliable, and positive individuals in the working world.

During their senior year, students are placed at a work site that most closely matches their interests, skills and abilities as well as their overall career goals. Cooperative Education students will receive on-the-job training, course credit, and a regular paycheck all at the same time. Once a student is placed on co-op/internship, their schedule may be similar to the following:

Periods 1-4 Attend Classes
Period 5 Lunch
Periods 6-9 Released for Co-op/internship
(schedules may vary depending on placement)

Many students who have had successful cooperative education experiences have continued working during the summer months following graduation. Many of these positions have the potential to become full time jobs for students.

Any junior interested in participating in the cooperative education/internship program during their senior year can pick up an application from the co-op/internship coordinator, prior to scheduling their senior year. Applications must be returned to the office.

Titusville Rockets Manufacturing

Student Run Manufacturing Enterprise

Titusville Rocket Manufacturing will enable qualifying students the opportunity to participate in a manufacturing enterprise that is making actual parts, delivering services, and adding value as part of the supply chain for local manufacturers. Over the course of an academic school year, students will perform different job functions in manufacturing, develop essential life-long skills, use advanced manufacturing technologies, and build relationships with local companies.

Titusville Rocket Manufacturing will involve coursework from the technology and business education departments. Students will be exposed to curriculum from the traditional courses Fundamentals of Technology, Manufacturing, Metal I, Metal II, Metal III and Marketing. By delivering parts and services essential for local businesses, students will learn skills which will prepare them to be an integral part of manufacturing. Students interested in becoming involved in Rocket Manufacturing should see their school counselor for scheduling information.

Career Planning

The Titusville Area School District has developed a comprehensive Prekindergarten – Grade 12 Career Education Plan. The goal of the plan is to have the students to make a strong connection between what they are learning academically and how it can apply to career planning. It is our goal to provide our students every opportunity to gain the best understanding of their individual interests, skills and abilities so that they can make an informed decision regarding their future plans beyond high school.

Students at Titusville High School have the opportunity to complete courses of study in one of five career pathways represented in the following chart. Coursework in each of these pathways is designed to provide students with a basis of knowledge that will assist them upon entrance into the workforce, technical training, or college.

THS CAREER PLANNING EXAMPLES				
Engineering & Industrial Technology	Business; Marketing, & Information Technology	Arts & Communication	Health & Human Service	Venango Technical Center
POSSIBLE CAREERS				Auto Body Repair
Carpenter	Administrative Assistant	Public Relations	Teacher	Automotive Technology
Electronics Technician	Webpage Designer	Graphic Designer	Police Officer	Building & Construction
Drafter	Accountant	Musician	Athletic Trainer	Culinary Arts
Machinist	Entrepreneur	Artist	Nurse	Computer Aided Drafting
Engineer	Bank Teller	Journalist	Chef	Allied Health Occupation
POSSIBLE ELECTIVES				Heating, Ventilation, & Air Conditioning
CORE: PreCalculus Advanced Math Calculus Trig/Stats Technical Math Adv Chemistry Adv Biology Physics I & II UNIFIED ARTS: World Language Computer Science Technology Ed	UNIFIED ARTS: Business Math Marketing Entrepreneurship Microsoft Office Accounting Adv Accounting Fin Accounting Intro to Comp Sci AP Comp Sci Prin PA Com Sci A World Language	CORE: Journalism UNIFIED ARTS: All Art Electives All Music Electives Yearbook World Language	CORE: Psychology Criminal Justice Stand Tall Peer Helping Service Learning Biology Chemistry UNIFIED ARTS: Child Development Cooking/Baking World Language	Machine Tool Technology Computer Info Systems Welding Technology Electronics Technology Natural Resources Protective Services Heavy Equipment Repair Technology Dental Assistant Early Childhood Education

NCAA/NAIA Eligibility

If a student/athlete is considering participating in a sport at a Division I or Division II college, they need to register with the respective eligibility center. It is recommended that you register during your junior year. For more information regarding eligibility rules, consult your school counselor or refer to the NCAA Eligibility Center Website at www.eligibilitycenter.org or the NAIA Eligibility Center at <https://www.playnaia.org>.

Course Listings for 2025-2026

ENGLISH

105	English 9
106	Academic English 9
108	Honors English 9*
110	Academic English 10
113	Honors English 10*
116	English 10
120	Academic English 11
123	Honors English 11*
124	English 11
130	Academic English 12
134	Honors English 12*
137	English 12
171	Yearbook Publication
172	Journalism

SOCIAL STUDIES

206	Acad. Am Cultures I
210	Honors Am Cultures II*
211	Acad. Am Cultures II
217	Honors Am Cultures I*
221	Acad Am Govt
223	Am Govt
229	US & the World
230	Acad. US & the World
231	Acad Pers Fin & Econ
233	Pers Fin & Econ
234	Honors Am Govt
235	Hon Pers Fin & Econ
236	Am Studies III
238	Honors US & the World*
239	AP European History*
240	Criminal Justice (sem)
241	Psychology (sem)

SCIENCE

306	Acad. Phys Science 9
331	Academic Biology
332	Biology
338	Advanced Biology***
341	Chemistry (2pd. two days/wk)*
342	Applied Chemistry****
348	Advanced Chemistry***
351	Physics I (2pd. two days/wk)*
352	Physics II***
363	Comprehensive Science
366	Ecology

MATH

401	Academic Algebra I
403	Academic Algebra II**
441A	Algebra IA
441B	Algebra IB
441	Algebra I
442	Algebra II
445	Geometry
446	Academic Geometry
454	Advanced Math*
455	Calculus***
456	PreCalculus***
458	Trigonometry (sem)
460	Statistics (sem)
462	Technical Math****

WORLD LANGUAGES

551	French I
552	French II
553	French III
554	French IV*
561	German I
562	German II
563	German III
571	Spanish I
572	Spanish II
573	Spanish III**
574	Spanish IV*
576	AP Spanish*

(Subject to Availability)

BUSINESS, COMP SCIENCE, & INFO TECH

387	Intro to Computer Science
388	AP Computer Science Principles*
389	AP Computer Science A*
395	Computer Science II
621	Business Math****
622	Marketing
623	Computer Applications
611	Entrepreneurship
626	Microsoft Office**
628	Accounting
633	Advanced Accounting
634	Financial Accounting**
661	Cooperative Education
664	Internship
678	Sports Marketing
680	Career Ed
836	Student Run Enterprise

ART

717	Studio Arts
718	2D Art
721	3D Art
725	Studio Arts II
726	Studio Arts III
727	Multimedia
730	Photography
731	Commercial Art
745	Adv Multimedia

MUSIC

749	Concert Choir
755	Symphonic Band
772	Perform Combination
762	Beginning Guitar (sem)
763	Music Theory & Technology I
764	Music Theory & Technology II
765	Music Career Prep (sem)
766	History of Rock (sem)
767	Performance Training (sem)
768	Guitar Ensemble
769	Music Theater

TECHNOLOGY EDUCATION

821	Fundamentals of Technology
822	Computer Aided Drafting (CAD)
825	Construction Technologies
826	Manufacturing
828	Metal Tech I
829	Metal Tech II
830	Metal Tech III
836	Student Run Enterprise

SERVICE-ORIENTED ELECTIVES

101	Stand Tall
102	Peer Helping
904	Service Learning

FAMILY & CONSUMER SCIENCE

859	Child Development I
860	Culinary Arts: Introduction to Baking
861	Culinary Arts: Introduction to Cooking
862	Applied Culinary Arts
870	Child Development II
871	Child Development III

PHYSICAL EDUCATION

949	Wellness Education
950	Strength and Conditioning
953	Lifeguarding

VENANGO TECHNOLOGY CENTER

960B	Auto Body Repair
960C	Automotive Technology
960D	Building Construction Technology
960E	Culinary Arts
960G	Computer Aided Drafting & Design
960I	Allied Health Occupations
960J	Machine Tool Technology
960L	Computer Info Systems
960M	Welding Technology
960N	Electronics Technology
960O	Natural Resources
960S	Protective Services
960U	Dental Assisting
960V	Heating, Ventilation, Air Conditioning
960W	Heavy Equipment Repair Technology
960Z	Early Childhood Education

* – Weighted

** – College in the Classroom

*** - Weight and College in the Classroom

**** - Not NCAA Approved

College & University Preparatory Program

Four-Year College and University Entrance Requirements

College bound students should consider a high school program that will prepare them for university and college-level work. For instance, most four-year college and university programs recommend the following high school level courses:

English	4 credits
Social Studies	4 credits
Mathematics	4 credits
(Recommend Academic Algebra II as minimum level)	
Sciences	4 credits
World Languages	4 credits
(With a minimum 2 credits of the same World Language recommended)	

Due to the competitiveness of most university and college programs, we strongly recommend that college prep students schedule the highest level of academic classes possible. Most college applications request information about honors classes and strength of schedules for the senior year. Science and mathematics courses taken during the senior year will strengthen the high school transcript and are vital for preparation of college-level courses.

COLLEGE PREPARATORY MAJOR

Grade 9

Period Course

1	Academic or Honors English 9
2	Academic or Honors Am. Cult. I
3	Academic Science 9 or Academic Biology
4	Acad. Algebra I, Algebra II or Geometry
5	Wellness Education
6	Foreign Language/General Elective
7	General Elective
8	General Elective
9	Directed Learning

Grade 10

Period Course

1	Acad. or Honors English
2	Acad. or Honors American Cultures II
3	Acad. Bio or Chemistry
4	Acad. Geometry, Algebra II or PreCalculus
5	Foreign Language/General Elective
6	Wellness Education
7	Elective Course or Chemistry Lab & Study Hall
8	General Elective
9	Directed Learning

Grade 11

Period Course

1	Academic or Honors English
2	Academic or Honors U. S. and the World
3	Chemistry or Physics I
4	Acad. Algebra II, Advanced Math, PreCalculus, Trig/Stats, Calculus
5	Foreign Language/General Elective
6	Wellness Education
7	Chemistry or Physics Lab & Study Hall
8	General Elective
9	Directed Learning

Grade 12

Period Course

1	Academic or Honors English
2	Academic or Honors World Cultures
3	Advanced Math, PreCalculus, Calculus, Trig/Stats
4	Physics I, Physics II, Adv Bio, AP Chem
5	Foreign Language/General Elective
6	Wellness Education
7	Elective or Physics Lab & Study Hall
8	General Elective
9	Directed Learning

English Course Descriptions

Every student in 9th, 10th, 11th, and 12th grade is required to take an English course.

105 English 9 **(1 credit)**

Grade 9

The English 9 course is literature based. In this course the students must meet a reading requirement and have a working knowledge of literary terms and vocabulary related to the readings. They will be exposed to all types of literature. Composition is also given a major emphasis. The principles of upper level grammar skills are introduced. Speech, a research project, and a variety of compositions complete the course. Ninth grade English is the foundation for the high school literature-based curriculum.

106 Academic English 9 **(1 credit)**

Grade 9

The English 9 course is literature based. In this course the students must meet a reading requirement and have a working knowledge of literary terms and vocabulary related to the readings. They will be exposed to all types of literature and a major emphasis is placed on the writings of many famous American and European writers. Composition is also given a major emphasis. The students weigh and organize ideas, analyze the literature in depth, and express thought effectively. The principles of upper level grammar skills are introduced. Speech, a research project, and a variety of compositions complete the course. Ninth grade English is the foundation for the high school literature-based curriculum.

108 Honors English 9 (weighted course) **(1 credit)**

Grade 9

Prerequisite: 90% or better in 8th grade Language Arts class and teacher recommendation.

Honors English 9 course is a literature based accelerated study of American and European writers. In this course the students must meet a reading requirement and have a working knowledge of literary terms and vocabulary related to the readings. They will be exposed to all types of literature and a major emphasis is placed on the writings of many famous American and European writers. Composition is also given a major emphasis. The students weigh and organize ideas, analyze the literature in depth, and express thought effectively. The principles of upper level grammar skills are introduced. Speech, a research project, and a variety of compositions complete the course. Honors English 9 is the foundation for the high school literature-based curriculum.

110 Academic English 10 **(1 credit)**

Grade 10

This class explores a broad selection of literature from authors around the world with major emphasis on literary analysis. Vocabulary study is an important component of the course. Essay writing is emphasized. Students will also write a research paper.

113 Honors English 10 (weighted course)
(1 credit)

Grade 10

Prerequisite: 90% or above in English 9/English teacher recommendation

The tenth-grade honors class consists of an accelerated study of world classics with a classroom emphasis on essay writing. Students will also write a research paper. Students must have their 9th grade teacher's recommendation upon registering for this course.

116 English 10
(1 credit)

Grade 10

This class reads a broad selection of world authors with special concentration upon works of high interest. Vocabulary improvement is a component of the course. Special concentration is given to mastering basic skills needed to write clear, well-organized prose. Students will also write a research paper.

120 Academic English 11
(1 credit)

Grade 11

This course emphasizes the interpretation of American literature and literary movements, requires essays and other forms of literary analysis, involves a review of grammar and mechanics, and includes a research paper on an American author or a work of American literature. Vocabulary study is a regular part of this course

123 Honors English 11(weighted course)
(1 credit)

Grade 11

Prerequisite: 90% average in English 10/English teacher recommendation.

The eleventh-grade honors class consists of an accelerated study of American literature and literary movements with an emphasis on essay writing. Vocabulary study is also a regular part of the course. Grammar and mechanics are reviewed as needed, and a research paper on an American author or a work of American literature is written.

124 English 11
(1 credit)

Grade 11

This course surveys many types of American literature, involves review of grammar and mechanics, includes vocabulary study, and a research paper. The research paper is highly recommended because it is worth more points than any assignment during the year.

130 Academic English 12
(1 credit)

Grade 12

This course emphasizes a study of British literature and literary analysis through a variety of schools of critical thought. Employment preparation is facilitated through practice creating a professional resume and accompanying business letters. Research gathering and analysis culminates in research paper on a British work of literature or author.

134 Honors English 12 (weighted course)**Grade 12****(1 credit)****Prerequisite: 90% average in English/English Teacher Recommendation**

This course consists of an accelerated study of British literature with a classroom emphasis on essay writing. Students will also write a research paper.

137 English 12**Grade 12****(1 credit)**

This is a required course for business education seniors; however, it is open to all seniors. It develops writing skills with special emphasis on letter writing. Vocabulary and spelling are emphasized along with the correct use of all grammar rules. Applications for literature, communication processes, and becoming a professional will be completed. Oral communication will be emphasized.

171 Yearbook Publications**Grades 9, 10, 11, 12****(1 credit)**

Students will be responsible for the creation of the Titusville High School yearbook, the *Optimist*. Students learn the basics of digital photography, on-line page layout and design, computer file management, and picture manipulation using Photoshop.

Students must be able to work productively in a team atmosphere and be open-minded. Strong writing skills, including spelling, grammar, and punctuation are helpful. Students will be required to cover evening and weekend activities, and to work on the yearbook outside of regular class times. These times may include study halls and/or after school hours when necessary as determined by the yearbook advisors.

172 Journalism**Grades 9, 10, 11, 12****(1 credit)**

Journalism is a year-long course designed to teach students the basics of modern American journalism and help them become more selective consumers of information from a variety of modern mass mediums. By the end of the course, students will be able gather information, write news stories in an objective, concise manner, and present it in both paper and electronic formats. They will also be able to develop informed opinions and present them as well-reasoned editorials.

Social Studies Course Descriptions

Every non-vo-tech student must earn four social studies credits in grades 9, 10, 11, & 12 to graduate. Vocational Technical students must earn three social studies credits to graduate. AP European History, Intro to Criminal Justice, and Psychology do not qualify as social studies credits but are elective credits towards graduation.

206 Academic American Cultures I **(1 credit)**

Grade 9

American Cultures is a study of the United States and its people. It covers the Native Americans, the explorers and colonization, the American Revolution, the Constitution, the Presidents, slavery and the Civil War and the Reconstruction. Skills emphasized are map reading, note taking, cartoon analysis, creative writing, and critical reading.

210 Honors American Cultures II (weighted course) **(1 credit)**

Grade 10

Prerequisite: 90% in Am. Cultures I, teacher recommendation

The Honors course covers similar subject matter to that which is offered to all tenth graders with a heavier emphasis on theory and research.

Students will analyze and discuss America's achievements and mistakes in both foreign and domestic policy from the Western movement through World War II. A major goal of this course is to develop within students a working knowledge and appreciation of our past and present American culture. While achieving this goal, students will also become aware of the evolution of their individual rights and freedoms as American citizens.

211 Academic American Cultures II **(1 credit)**

Grade 10

Students will analyze and discuss America's achievements and mistakes in both foreign and domestic policy from the Western movement through World War II. A major goal of this course is to develop within students a working knowledge and appreciation of our past and present American culture. While achieving this goal, students will also become aware of the evolution of their individual rights and freedoms as American citizens.

217 Honors American Cultures I **(1 credit)**

Grade 9

Prerequisite: 90% or better in their 8th grade Western Civilizations class, teacher recommendation.

The Honors course covers similar subject matter to that which is offered to all ninth graders with a heavier emphasis on theory and research.

American Cultures is a study of the United States and its people. It covers the Native Americans, the explorers and colonization, the American Revolution, the Constitution, the Presidents, slavery and the Civil War and the Reconstruction. Skills emphasized are map reading, note taking, cartoon analysis, creative writing, and critical reading.

221 Academic American Government
(0.5 credit) - taken with Acad Pers Fin & Econ

Grade 12

Students will learn about basic constitutional principles that affect all levels of government and, ultimately, the people of the nation. Considerable time will be spent on the organizational structure of the federal, state and local government and how each level affects the lives of the American people. Students will also understand the difficulties of governing and the political culture of the United States. The rights and responsibilities of the citizen within this system will be heavily emphasized. Students will relate material to current events and will have a basic understanding to enter a college political science course.

223 American Government
(0.5 credit) - taken with Pers Fin & Econ

Grade 12

Students will learn about basic structure of all levels of government and how they impact the people of the nation. Considerable time will be spent on the organizational structure of the federal, state and local government and how each level affects the lives of the American people. The rights and responsibilities of the citizen within this system will be heavily emphasized. Current events, as related to the study of government, will be an integral part of the course.

229 The United States and the World
(1 credit)

Grade 11

The third course in the American historical sequence begins with the Post-World War II era and continues through the present. The emphasis of the course is on the role of the United States as a world leader and its interaction with other regions of the globe. Both domestic and foreign affairs will be studied in this context. Intertwined with the American emphasis, the course will be an overview of significant western and non-western cultures and how they interact with the United States.

230 Academic United States and the World
(1 credit)

Grade 11

The third course in the American historical sequence begins with the Post-World War II era and continues through the present. The emphasis of the course is on the role of the United States as a world leader and its interaction with other regions of the globe. Both domestic and foreign affairs will be studied in this context. Intertwined with the American emphasis the course will be an overview of significant western and non-western cultures and how they interact with the United States.

231 Academic Personal Finance and Economics
(0.5 credit) – taken with Acad Am Govt

Grade 12

The course will help students understand how economies work and learn personal finance skills. Heavy emphasis will be given to the concepts of capitalism and a market economy: rational choices, government impact on the economy, national economic health, supply and demand, market structure, business and labor and the financial sector. Students will receive the basics to prepare them for a college economics course. Throughout the semester, personal

finance will tie into the broader understanding of how the economy works, including: budgeting, financial planning, saving, investing, credit, debt management, risk management, insurance, and consumer rights and responsibilities.

233 Personal Finance and Economics
(0.5 credit) - taken with Am Govt

Grade 12

The course will help students understand how economies work and learn personal finance skills. Heavy emphasis will be given to the concepts of capitalism and a market economy: basics of economics, government impact on the economy, broader economic issues, how prices are created, business, labor and banking. Throughout the semester, personal finance will tie into the broader understanding of how the economy works, including: budgeting, financial planning, saving, investing, credit, debt management, risk management, insurance, and consumer rights and responsibilities.

VoTech student curriculum will continue the American Studies curriculum and focus on how the economy operates based on events that have occurred historically such as the Oil Crises and inflation of the 1970's and the Great Recession of 2008. They will learn about broader economic issues, how prices are created, business, labor and banking. Throughout the semester, personal finance will tie into the broader understanding of how the economy works, including: budgeting, financial planning, saving, investing, credit, debt management, risk management, insurance, and consumer rights and responsibilities.

234 Honors American Government (weighted course)
(.5 credit) - taken with Honors Pers Fin & Econ
Prerequisite: 90% in US & World, teacher recommendation

Grade 12

Students will understand how American government and politics approach public concerns, and protect rights by creating public policy through three branches and levels of government. Students will have the ability to assess founding documents, Supreme Court decisions, interpret quantitative data, and complete college level research and produce projects. Students will also understand the difficulties of governing and the political culture of the United States. The rights and responsibilities of the citizen within this system will be heavily emphasized. Students will relate material to current events and will have the ability to compare different sources of information.

235 Honors Personal Finance and Economics (weighted course)
(.5 credit) - taken with Hon Am Govt
Prerequisite: 90% in US & World, teacher recommendation

Grade 12

The course will allow students to understand the social science of economics and will learn personal finance skills. Heavy emphasis will be given to the concepts of capitalism and a market economy: economic philosophy, fiscal impact on the economy, national economic productivity and statistical analysis, supply and demand, market structure, labor and monetary policy. Students will complete college level economics research and produce projects. Throughout the semester, personal finance will tie into the broader understanding of how the economy works, including: budgeting, financial planning, saving, investing, credit, debt management, risk management, insurance, and consumer rights and responsibilities.

236 American Studies III
(0.5 credit) Vo-Tech Students only-taken with Pers Fin & Econ

Grade 12

In this course, covering World War II to the present, students will analyze and discuss America's foreign and domestic policy in relation to the major concepts and institutions of government and economics, building on the basics from American Cultures I.

A major goal of this course is to develop within students a working knowledge and appreciation of our past and present, and future American culture. While achieving this goal, students will also become aware of the evolution of their individual rights and freedoms as American citizens in a capitalistic society.

238 Honors United States & The World (weighted course)
(1 credit)
Prerequisite: 90% in Am. Cultures II, teacher recommendation

Grade 11

The Honors US & the World course is similar in structure to the academic course. The honors course, however, is a more rigorous and in-depth study of America and its modern role in the world.

The third course in the American historical sequence begins with the Post-World War II era and continues through the present. The emphasis of the course is on the role of the United States as a world leader and its interaction with other regions of the globe. Both domestic and foreign affairs will be studied in this context. Intertwined with the American emphasis the course will be an overview of significant western and non-western cultures, and how they interact with the United States.

239 Advanced Placement European History (weighted course)
(1 credit)

Grade 10, 11 12

The European history elective will review modern political, economic, and cultural events of Western and Eastern Europe from the Medieval Era to the present day. Advanced Placement (AP) students will experience college level skills of lecture, reading, document analysis, and free response essay writing. Students may use the AP title on their college applications, even if they do not receive the necessary college credits. Those receiving a higher score on the AP test may be able to apply for college credits depending on their future university. Taking the AP exam at the end of the year is strongly recommended. There is an exam fee. However, for students of proven economic need the test is free.

240 Introduction to Criminal Justice
(0.5 credit) - Must be taken with Psychology

Grade 10, 11 12

This semester course will be a survey and analysis of the criminal justice system, including an historical and philosophical overview of its development, with special emphasis on the system's primary components and the relationship among these components in the administration of criminal justice in America.

The course emphasizes terminology, theory, and court cases. Teaching methods for this course will include lecture, analytical reading, research papers, short essays, and class discussion. A variety of films will be used to depict the topics being studied.

241 Psychology**Grade 10, 11 12****(0.5 credit) -Must be taken with Criminal Justice**

This course surveys the major principles of psychology. The history of psychology, human development, personality, abnormal behavior, social psychology, feelings and emotions, research methodologies, experimental psychology, psychophysiology, learning and memory, sleep and dreams, and industrial and organizational psychology will be introduced.

Science Course Descriptions

Students are required to complete 3.0 credits of science in grades 9-12.

Ninth graders must meet all the following criteria to enroll in Academic Biology:

1. Recommendation from eighth grade science teacher
2. Minimum overall grade of 85%
3. Cumulative grade of 85% throughout middle school career in science.
4. Successful completion of Algebra I with a minimum grade of 85%
5. All ninth-grade students that enroll in Academic Biology are committed to the following course sequence: Academic Biology, Chemistry and Physics I

Any student that opts out of Physics I must complete Academic Physical Science 9 to meet graduation requirements.

306 Academic Physical Science 9 **(1 credit)**

Grade 9

This course introduces the student to the study of chemistry, physics, and environmental science. Topics covered include scientific method, atomic structure, and the periodic table, chemical bonding, chemical reactions, metric system, forces, Newton's Laws of Motion, work, power, energy, ecosystems, biomes and a special emphasis on energy resources. The methods used to accomplish this are demonstrations, reading activities, lecture, lab activities (experimentation), and projects. Some of the course work may be completed online.

331 Academic Biology **(1 credit)**

Grade 9, 10

Prerequisite: 80% in Academic Physical Science 9 or have met the 9th grade requirements.

This course is a study of the structure and function of prokaryotic and eukaryotic cells. This includes an in-depth study of the chemical composition of cells, Mendelian genetics, and organic variation of organisms and classification of living things into six different kingdoms.

332 Biology **(1 credit)**

Grade 10

Prerequisite: Physical Science 9

This course is a general introduction to the biological principles of cells, genetics, and the living organisms found in the six biological kingdoms.

338 Advanced Biology (weighted course) **(1 credit)**

Grade 11, 12

Prerequisite: 80% in Academic Biology and recommend Chemistry.

The course is divided into two major units. Unit I is an in-depth study of human anatomy and physiology. It includes an intensive dissection of the cat. Unit II is an expansion of the topics covered in academic biology. In this unit students will explore cell structure and function, many cellular processes, and human genetics. This course is offered as a *COLLEGE IN THE*

HIGH SCHOOL opportunity; students enrolling in this course can use this course for potential college credit and must pay the tuition amount set by the University in order to receive college credits.

341 Chemistry (weighted course)
(1 credit)

Grade 10, 11, 12

Prerequisite: Algebra I and strong background for problem solving, earned at least 80% in Academic Biology

This course surveys the concepts of matter, its structure and interactions. Problem solving, lecture and discussion are emphasized with two lab periods weekly.

342 Applied Chemistry
(1 credit)

Grade 11, 12

Prerequisite: Biology

An applied lab science designed for the student that expresses an interest in the chemical sciences but does not have outstanding math and science skills. The course is a survey course of matter, its structure and interactions and its relationships to the environment and the human population.

348 Advanced Chemistry (weighted course)
(1 credit)

Grade 11, 12

Prerequisite: Chemistry and earned at least a 80%

The course is subdivided into several units including stoichiometry, reactions in aqueous solution, gases, thermochemistry, chemical kinetics, chemical equilibrium, and electrochemistry. This course is offered as a *COLLEGE IN THE HIGH SCHOOL* opportunity; students enrolling in this course can use this course for potential college credit and must pay the tuition amount set by the University in order to receive college credits.

351 Physics I (weighted course)
(1 credit)

Grade 11, 12

Prerequisite: Strong math background. **Recommended:** Algebra II, earned at least a 80% in Chemistry

This course is a study of mechanics and mechanical forms of energy, including the study of light energy, waves and sound. Emphasis is placed on problem solving with two lab periods weekly.

363 Comprehensive Science
(1 credit)

Grade 11, 12

Prerequisite: Physical Science 9 and Biology

This is a basic science course that stresses the role of science in everyday living. The course applies the principles of chemistry, physical science and ecology to daily activities. The diverse range of topics provides students with practical science knowledge that can be applied to their postgraduate careers and livelihood.

366 Ecology**Grade 11, 12****(1 credit)****Prerequisite: Physical Science 9, Biology**

This course is a study of the interaction between living things and their environment. The topics covered include: ecosystem structure and relationships, biodiversity, pollution sources and control, resource management, environmental regulations and watershed education. The role of humans in the environment will be stressed in each topic.

352 Physics II (weighted course)**Grade 12****(1.00 credits)****Prerequisite: Physics I**

This course will include the study of heat and energy, electromagnetism, nuclear energy and modern physics. Emphasis is placed on problem solving. This course is offered as a *COLLEGE IN THE HIGH SCHOOL* opportunity; students enrolling in this course can use this course for potential college credit and must pay the tuition amount set by the University in order to receive college credits.

Mathematics Course Descriptions

401 Academic Algebra I

Grade 9, 10, 11, 12

(1 credit)

Prerequisite: Math 8

This is the first course in the college preparatory math sequence. Students will review the language of algebra, operations with signed numbers, and the basic properties for simplifying and solving equations. Students will learn techniques to solve first and second-degree algebraic sentences. Students will use problem-solving techniques in working with word problems involving fractions, decimals, and percent. Students will be introduced to graphing first-degree equations and inequalities in one and two variables.

403 Academic Algebra II

Grade 9, 10, 11, 12

(1 credit)

Prerequisite: Academic Geometry

This is the third course in the college preparatory math sequence. Equations, inequalities and word problems will be reviewed and built upon to extend the skill level of the student. Graphing linear and non-linear equations and inequalities, distance problems, and other critical thinking word problems will be explored in greater depth. Other topics include conic sections, trigonometry, vectors, imaginary numbers, complex numbers, volume, area and perimeter of geometric figures, and angles in circles. This course is offered as a *COLLEGE IN THE HIGH SCHOOL* opportunity; students enrolling in this course can use this course for potential college credit and must pay the tuition amount set by the University in order to receive college credits.

441A Algebra IA

Grade 9

(1 credit)

Prerequisite: Math 8

This is the beginning of the first course in the college preparatory math sequence. Students will study the language of algebra, operations with signed numbers, and the basic properties for simplifying and solving equations. Students will learn techniques to solve first degree algebraic sentences. Students will use problem-solving techniques in working with word problems involving fractions, decimals, and percent. Students will be introduced to graphing first-degree equations.

441B Algebra IB

Grade 9, 10

(1 credit)

Prerequisite: Algebra IA

This is the second part of the Algebra I course. Students will review all topics from Algebra IA including the language of algebra, operations with signed numbers, and the basic properties for simplifying and solving equations. Students will learn techniques to solve first and second-degree algebraic sentences. Students will use problem-solving techniques in working with word problems involving fractions, decimals, and percent. Students will be introduced to graphing first-degree equations and inequalities in one and two variables. Students will also be introduced to basic geometrical terminology and problems.

442 Algebra II**Grade 10, 11, 12****(1 credit)****Prerequisite: Geometry**

Equations, inequalities and word problems will be reviewed and built upon to extend the skill level of the student. Graphing linear and non-linear equations and inequalities, distance problems, and other critical thinking word problems will be explored in greater depth. Other topics include conic sections, trigonometry, vectors, imaginary numbers, complex numbers, volume, area and perimeter of geometric figures, and angles in circles.

445 Geometry**Grade 10, 11, 12****(1 credit)****Prerequisite: Algebra I**

This course covers the various geometric shapes and properties of those shapes. Also covered are similar and congruent polygons, constructions, coordinate geometry, and proofs. Additional topics to be covered include trigonometric functions, algebraic processes, and problem solving.

446 Academic Geometry**Grade 9, 10, 11, 12****(1 credit)****Prerequisite: College Prep Algebra I, Algebra IA, Algebra IB**

This is the second course in the college preparatory math sequence. This course covers the various geometric shapes and properties of those shapes. Also covered are similar and congruent polygons, constructions, coordinate geometry, and proofs. Additional topics to be covered include trigonometric functions, algebraic processes, and problem solving.

456 PreCalculus (weighted course)**Grade 10, 11, 12****(1 credit)****Prerequisite: Algebra II**

The content of PreCalculus is organized around functions, trigonometry, linear systems, sequences, series, probability, and geometry. This course continues to build algebraic skills and enhance advanced problem-solving techniques. This course is offered as a *COLLEGE IN THE HIGH SCHOOL* opportunity; students enrolling in this course can use this course for potential college credit and must pay the tuition amount set by the University in order to receive college credits.

454 Advanced Mathematics (weighted course)**Grade 11, 12****(1 credit)****Prerequisite: PreCalculus**

This course is made up of four units: vectors, circular functions and trigonometry, probability and statistics, and pre-calculus involving sequence, series, and limits. Each unit lasts approximately nine weeks. These units are usually incorporated in Calculus I in college.

455 Calculus (weighted course)**Grade 11, 12****(1 credit)****Prerequisite: PreCalculus**

This course is limited to those students in the eleventh and twelfth grade who have demonstrated an exceptional aptitude in mathematics. An in-depth study of derivatives, integrals, and the application of these topics to solve real-life problems is covered in this course. In addition, graphing calculators are integrated throughout the year. This course is offered as a *COLLEGE IN THE HIGH SCHOOL* opportunity; students enrolling in this course can use this course for potential college credit and must pay the tuition amount set by the University in order to receive college credits.

458 Trigonometry**Grade 10, 11, 12****(0.5 credit)****Prerequisite: Academic Algebra II or Algebra II****Must be taken with Statistics**

This semester course is offered for those students who desire to continue their study of mathematics. This course will also be helpful to any student who may wish to continue their education beyond high school in those fields that require a strong background in mathematics. This course will include the following topics: Right Triangle Trigonometry, Graphs of Trigonometric Functions, Inverse Trigonometric Functions, Trigonometric Identities and Verification of Identities, solving Trigonometric Equations, Law of sines and cosines, Vectors, Trigonometric Form of a Complex Number, and Applications of Trigonometric Functions. This course must be taken in conjunction with the semester Statistics course.

460 Statistics**Grade 10, 11, 12****(0.5 credit)****Prerequisite: Academic Algebra II or Algebra II****Must be taken with Trigonometry**

This semester course is designed to give a deeper understanding of statistics. The topics covered in the course include: counting principles, probability, sampling, sampling distributions, data analysis, regression/correlation, and problem solving. This course must be taken in conjunction with the semester Trigonometry course.

462 Technical Mathematics**Grade 11, 12****(1 credit)****Prerequisite: Geometry****Recommended for all Technology Education students**

This course is designed for those students who learn best through an applied approach. This course will prepare students for both a career in the technology industry and going on to a four-year college program. The topics covered will be those valued by industry; namely measurement, number sense, geometry, trigonometry, and statistics. This course will have emphasis in the areas of wood and metal taught by the Technology Education Department.

Business, Computer, & Info Technology Course Descriptions

387 Introduction to Computer Science **(1 credit)**

Grade 9, 10, 11, 12

Delivery Model: Blended Instruction

This course is an interactive introductory course for students brand new to programming that teaches the foundations of computer science using the Python language. This course will teach students how to think computationally and solve complex problems, skills that are important for every student. This course is offered in a blended learning environment that includes an online component.

388 AP Computer Science Principles (weighted course) **(1 credit)**

Grade 11, 12

Delivery Model: Blended Instruction

Prerequisite: Introduction to Computer Science

The course introduces students to the creative aspects of programming, abstractions, algorithms, large data sets, the Internet, cybersecurity, and how computing impacts our world. Students will develop the computational thinking skills needed to fully exploit the power of digital technology and help build a strong foundation in core programming and problem-solving. This course will prepare students for the end-of-course AP Exam with potential to earn college credit. This course is offered in a blended learning environment that includes an online component.

389 AP Computer Science A (weighted course) **(1 credit)**

Grade 12

Delivery Model: Blended Instruction

Prerequisite: AP Computer Science Principles

Students will learn to design and implement computer programs that solve problems relevant to today's society, including art, media, and engineering. AP Computer Science A teaches object-oriented programming using the Java language and is meant to be the equivalent of a first semester, college-level course in computer science. It will emphasize problem solving and algorithm development, and use hands-on experiences and examples so that students can apply programming tools and solve complex problems. This course will prepare students for the end-of-course AP Exam with the potential to earn college credit. This course is offered in a blended learning environment that includes an online component.

395 Computer Science II **(1 credit)**

Grade 10, 11, 12

Delivery Model: Blended Instruction

Prerequisite: Introduction to Computer Science

This course builds on the Introduction to Computer Science foundation, covering some additional programming and computer science topics, and then applying and extending computational problem-solving skills in a variety of application areas. This course will apply computation to such areas as art, science, music, math, data analysis and visualization, simulations, game design, web applications, security, machine learning and artificial

intelligence, and more. This course is offered as a *COLLEGE IN THE HIGH SCHOOL* opportunity; students enrolling in this course can use this course for potential college credit and must pay the tuition amount set by the University in order to receive college credits.

473 Business Mathematics
(1 credit)

Grade 9, 10, 11, 12

This course is open to all students as an elective. Students will use mathematical procedures to solve problems related to the operations and management of a business. These areas include cash management, investing, gross and net pay, taxes, insurance, credit, business loans and business records. In addition, topics covered will include personnel and production costs; sales, purchasing, and marketing costs; and distribution costs. This course is recommended for students looking at a career in business management, accounting, or finance.

611 Entrepreneurship
(1 credit)

Grade 9, 10, 11, 12

This course is recommended for all Business Education sophomores, juniors or seniors. Any student considering a career in business management, finance, or planning to start their own business should enroll in this course. In addition to the many topics related to business management, students will learn about investing in banks, stocks, bonds and mutual funds. Students will complete projects that include an interview of a local entrepreneur and a business plan.

622 Marketing
(1 credit)

Grade 9, 10, 11, 12

Marketing is all around you and affects almost everything you do. Taking a Marketing class will help you understand the personal decisions you make as a consumer, as well as the career you might choose. You will learn about the 4 Ps of marketing - product, place, price, and promotion - as well as how research is conducted to make business decisions. You will also create a Marketing Plan for a new or existing product. As you explore and discover marketing concepts, you will learn life-long skills that will follow you wherever your interests may lead.

623 Computer Applications
(1 credit)

Grade 9,10, 11, 12

Computer applications will help students choose a career in information technology by exposing them to the many certification opportunities available in this field of study. Through assignments and projects, students will be introduced to computer hardware repair and software installation, databases, Google products, web page design, basic graphic enhancements, and an introduction to computer programming.

626 Microsoft Office
(1 credit)

Grade 9, 10, 11, 12

Utilizing Microsoft Office, students will complete assignments and solve problems in **Microsoft Word, PowerPoint, Excel, and Access**. Emphasis is placed on advanced document processing and presentations. Students will also learn to create professional looking spreadsheets and graphs as well as build databases for generating reports. This course is offered as a *COLLEGE IN THE HIGH SCHOOL* opportunity; students enrolling in this course can

use this course for potential college credit and must pay the tuition amount set by the University in order to receive college credits.

628 Accounting
(1 credit)

Grade 9, 10 ,11 ,12

This course is recommended for college bound students considering accounting, finance or other business majors. Students will learn the systematic procedure for keeping financial records for a business. This course will cover the accounting cycle for a service business organized as a proprietorship and the accounting cycle for a merchandising business organized as a corporation.

633 Advanced Accounting
(1 credit)

Grade 10, 11, 12

Prerequisite: Accounting

This career readiness course will prepare the student for the various opportunities available in the profession of accounting, including financial, auditing, information systems, government, and forensic accounting. Students will be exposed to internal cost and managerial accounting, financial statement analysis and reporting, the time value of money, budgeting, and business operating and financing activities. Attention to detail is emphasized as students are asked to solve complex, multi-step problems. This course is aligned with curriculum created by the American Institute of Certified Public Accountants. This course is offered as a *COLLEGE IN THE HIGH SCHOOL* opportunity. Students enrolling in this course should be interested in a career in accounting or finance and must pay the tuition amount set by the University in order to receive college credits.

634 Financial Accounting
(1 credit)

Grade 11, 12

Delivery Model: Online and Face-to-Face

Prerequisite: Advanced Accounting

This culminating course provides a “head start” to the study of college level financial accounting principles and practices. Students will gain a better understanding of financial statements and analysis, expand on prior knowledge of accounting for corporations, and enhance skills using spreadsheet software.

661-663 Cooperative Education
(Terms and credits vary dependent upon hours)
Prerequisite: Application required

Grade 11, 12

The cooperative education program is available to seniors who meet the following criteria: fulfill their course requirements and are on track to graduate, maintain grades of C or higher in their classes, demonstrate good work habits and positive character, and attend school regularly. Cooperative Education provides students the opportunity to work in a career-related field while studying in school. As a result, students can experience a successful transition from school to the work place.

The internship program is available to seniors who meet the following criteria: fulfill their course requirements and are on track to graduate, maintain grades of C or higher in their classes, demonstrate good work habits and positive character, and attend school regularly. Internships provide students the opportunity to work in a career-related field while studying in school. As a result, students can experience a successful transition from school to the work place. Students placed for an internship will not be compensated for their work time.

664-665 Computer/Technology Internship
(Terms and credits vary dependent upon hours)
Prerequisite: One AP Computer Science Course

Grade 11, 12

Students that complete at least two computer science courses (Introduction to Computer Science + one AP computer science course) are eligible to complete an internship with the Titusville Area School District Information Technology Department as a tech support intern.

678 Sports Marketing
(1 credit)

Grade 9, 10, 11, 12

This course provides students with an understanding of the principles and practices of sports management and marketing. Students will explore various aspects of the sports industry, including event planning, sponsorship, branding, and fan engagement. Through hands-on projects and real-world case studies, students will develop skills in marketing, communication, leadership, and critical thinking.

680 Career Education

Grade 12

The Career Education course focuses on the acquisition of the Occupational Safe and Health Administration (OSHA) industry-based credential. Students who successfully complete this online course will demonstrate employability skills that will allow them to perform occupational skills in a safe and healthy manner.

World Languages Course Descriptions

(Subject to Availability)

551 French I

(1 credit)

Grade 9, 10, 11, 12

Emphasis is on the use of the language for everyday conversation. Listening and speaking activities provide opportunities to use familiar vocabulary. Structure and sentence writing are included to allow expression of ideas. The culture of the French-speaking world is introduced.

552 French II

(1 credit)

Grade 10, 11, 12

Prerequisite: French I

Listening, speaking and reading skills are expanded through the study of the vocabulary and the structure of the language. Writing is primarily sentences and short paragraphs about topics studied. The culture of daily life in a French speaking community is the focus.

553 French III

(1 credit)

Grade 12

Prerequisite: French II

Reading selections and conversations increase the student's vocabulary and the ability to express his ideas. Speaking and listening activities use functional vocabulary in various situations. Writing skills are broadened to include the new vocabulary. The cultural perspectives of the French-speaking world are introduced.

554 French IV (weighted course)

(1 credit)

Grade 11, 12

Prerequisite: French III

The functional vocabulary and structures are expanded to allow for greater expressions of ideas. The emphasis is on communication, both oral and written. The cultures of many French speaking countries are studied. Students are introduced to authentic literary selections.

561 German I

(1 credit)

Grade 9, 10, 11, 12

This course is an introduction to the language and culture of the German people. Emphasis is placed on listening and speaking skills using everyday vocabulary. Reading and writing skills are used mainly in text and workbook exercises.

562 German II**Grade 10, 11, 12****(1 credit)****Prerequisite: German I**

The skills of German I are further developed. There is more emphasis on writing and reading skills based on text materials. Culture as it relates to daily life is examined as topics arise in readings and photos.

563 German III**Grade 10, 11, 12****(5 periods/wk - 1 year, 1 credit)****Prerequisite: German II**

Vocabulary of familiar topics is expanded through exercises and composition. Reading will include dialogues and longer reading selections. Emphasis is placed on topical conversational skills and listening comprehension. Culture is discussed as needed when related to the readings.

571 Spanish I**Grade 9, 10, 11, 12****(1 credit)**

Listening, speaking, reading and writing skills as well as grammar through oral and written exercises will be introduced and developed. A brief cultural history of Spain, Latin America, and Spanish speaking people of the United States will acquaint the student with cultural differences.

572 Spanish II**Grade 9, 10, 11, 12****(1 credit)****Prerequisite: Spanish I**

Beginning units are prepared to make a smooth transition from Level I. Coordinated tape and workbook programs; dialogues and reading selections will develop listening, speaking, reading and writing skills. Students will learn and use practical vocabulary and no-nonsense grammar. There will be an introduction to literature along with an in-depth study of the culture of the Spanish-speaking world.

573 Spanish III**Grade 10, 11, 12****(1 credit)****Prerequisite: Spanish II**

This course is an advanced study of language and the culture of Spanish people. Useful everyday vocabulary, grammar review, reading and discussions of short, humorous stories, essays, composition, conversation, and magazine articles are emphasized. This course is offered as a *COLLEGE IN THE HIGH SCHOOL* opportunity; students enrolling in this course can use this course for potential college credit and must pay the tuition amount set by the University in order to receive college credits.

574 Spanish IV (weighted course)**Grade 11, 12****(1 credit)****Prerequisite: Spanish III**

This course is an intense study of language and culture of Spanish people. Useful, everyday vocabulary, travel vocabulary, grammar review, reading and discussion of plays, short stories, and magazine articles, and selections from classic and contemporary literary works are emphasized. Composition, essays, and writing skills are developed from the grammar and vocabulary study.

576 AP Spanish Language and Culture (weighted course)
(1 credit)

Grade 12

Prerequisite: Spanish IV

The AP® Spanish Language course is conducted completely in Spanish. Students are encouraged to use Spanish with their teacher and peers at all times to express opinions and feelings on various topics, in a variety of styles. Authentic materials will be used along with a learning site for the text. Speaking, listening, grammar and literature will be stressed in preparation for taking the AP Spanish Language and Culture exam in the Spring.

Music Course Descriptions

749 Concert Choir **(1 credit)**

Grade 9, 10, 11, 12

A positive attitude towards singing and learning how to use the voice is a must. Attendance at all concerts is also required. This course provides vocal experience for students with average or above average musical ability. Sacred, secular, and classical music from many stylistic periods are studied and performed. Concert Choir is a more advanced four part choir. Repertoire is selected for the appropriate musical performing level of the choir students. Small ensemble and solo experience is available to advanced students.

755 Symphonic Band **(1 credit)**

Grade 9, 10, 11, 12

Prerequisite: Adequate performing ability on a musical instrument

This course is designed for any instrumentalist who is interested in performing with others. Average or above average instrumental ability is required, as well as attendance at all performances. Symphonic band music of all styles will be explored and performed.

772 Performance Combination **(1 credit)**

Grade 9, 10, 11, 12

Prerequisite: Adequate performing ability on a musical instrument

This course will combine the qualifications and benefits of both symphonic band and concert choir with rehearsal time divided equally between the organizations. This will be under the guidance of both directors to enhance development in both areas. Grades for Performance Combination students will be split equally between symphonic band and concert choir participation.

762 Beginning Guitar

Grade 9, 10, 11, 12

(½ credit) - Must be taken with Music Career Prep or History of Rock

Students will learn the basics of strumming and picking techniques on acoustic guitar. They will learn to play from written musical notation, chord symbols, and tablature. This course is designed for students with no prior experience. Guitars will be available for use free of charge pending submission of an instrument loan agreement.

763 Music Theory and Technology I **(1 credit)**

Grade 9, 10, 11, 12

This course is recommended for anyone who is interested in serious music study as an occupation or hobby. This course will cover the fundamentals of music including notation, scales, tonality, key, modes, intervals, transposition, and chords. The structural elements of music will also be covered which include harmony, melodic organization, rhythm, texture, and writing. Students will also learn basic techniques for various current music technologies. Students will learn how to arrange/compose using notational software. They will also learn how to layer and edit multi-track recordings.

764 Music Theory and Technology II**Grade 9, 10, 11, 12****(1 credit)****Prerequisite: Music Theory and Technology I**

Music Theory and Technology II is a follow up course to Music Theory and Technology I. The course objectives for Music Theory and Technology II are that the student will be able to analyze, notate, and compose music within the accepted norms of current musical practice. Class content will include scales, intervals, chords, harmonic progression, rules of voice leading, tonality/modality, figured bass, the function and structure of melody and harmony, applications of non-harmonic tones, harmonization of a given part, cadences, modulation, and problems in harmonic analysis. Students will also learn advanced techniques for various current music technologies. Students will learn how to arrange/compose using notational software. They will also learn how to layer and edit multi-track recordings.

765 Music Career Prep**Grade 9, 10, 11, 12****(½ credit) - Must be taken with Performance Training or Beginning Guitar**

This course is designed for students who are considering any type of career in music; such as music education, music performance, music therapy, or music production. Various career choices and the education required for them will be explored. Students will be exposed to basic skills that are commonly assessed by university music departments and required for incoming freshman for entry into any type of music degree program.

766 History Of Rock**Grade 9, 10, 11, 12****(½ credit) - Must be taken with Performance Training or Beginning Guitar**

In this course, students will be exposed to the fundamentals of rock music. Core repertoire would be studied in depth to provide an understanding of the various techniques necessary to authentically perform various popular musical styles. This course would equip students who already sing/play with some of the musical background necessary for starting their own band.

767 Performance Training**Grade 9, 10, 11, 12****(½ credit) - Must be taken with Music Career Prep or History of Rock**

This course is designed for students who already have experience singing and/or playing an instrument but would like to be better prepared to face music auditions. These auditions are a common part of the life of any student musician, including: concert solo auditions, musical theatre auditions, honors festival auditions, and university music program entry auditions. Course topics would include repertoire selection, practice techniques, mistake recognition, sight-reading techniques, mental preparation, overcoming stage fright, recovery techniques, and performance etiquette. An emphasis would be placed on developing independent musicianship. Students will be expected to prepare numerous solos as well as ensemble music.

768 Guitar Ensemble**Grade 10, 11, 12****(1 credit)****Prerequisite: Beginning Guitar**

Guitar Ensemble is designed as an extension and application of previously learned beginning guitar skills. Instruments will be available for student use. The ensemble is a performing group, so participation in 3 evening concerts is expected. Students must have passed the Beginning Guitar elective or a playing proficiency exam with the instructor prior to admission into the course.

769 Music Theater
(1 credit)
Prerequisite: None

Grade 9, 10, 11, 12

The Music Theater elective is for students who have an interest in music theater. The final product of this class will be to perform a Broadway Jr show. Course objectives will include directing, acting, producing, set designing, and stage crew. All students in the class will be expected to be part of the final production as part of their course grade.

Art Course Descriptions

717 Studio Arts **(1 credit)**

Grade 9, 10, 11, 12

This entry-level course will introduce a variety of techniques and media, meeting student needs and interests. Designed for you to be successful, we take an academic approach to art and its concepts. Activities will include drawing with pencil, ink and pastels, watercolor and acrylic painting, printmaking, sculpture basics, pottery and illustration. This course will also help develop the creative process, as well as the craft of art. This Studio Arts class is a prerequisite for most other art courses and requires a grade 70% or higher to progress to other art classes. A sketchbook is required for the second semester.

718 2D Art **(1 credit)**

Grade 10, 11, 12

Prerequisite: Studio Arts

2D Art is a year-long course designed for tenth, eleventh and twelfth grade art students. In 2D Art, art students will be challenged in two-dimensional media, concepts and techniques. Art students will develop creative problem-solving and technical skills through hands on studio experiences in a variety of drawing, painting and printmaking media. Students will also explore realistic, abstract and non-objective subject matter using a variety of wet and dry media. Students will have the opportunity to develop skills working from both direct observation and creative imagination. With the 2D Art studio experience and the study of historical works, students will learn to communicate ideas in both visual and verbal forms.

721 3D Art **(1 credit)**

Grade 10, 11, 12

Prerequisite: Studio Arts

Students will be given the opportunity to develop their skills creating 3D art through form and mass using a variety of media. Projects will be constructed from clay, wood, plaster and many other types of material. A strong emphasis will be placed on the ceramics process with hand building and the use of the pottery wheel. This course will give students the freedom to develop artistic exploration and concentration. Conceptualizing and designing projects will be a focus of the course. For the Art career focused student, developing pieces for a portfolio will be a requirement.

725 Studio Arts II **(1 credit)**

Grade 10, 11, 12

Prerequisite: Studio Arts teacher recommendation.
(Sketchbook required)

The course consists of drawing (oil pastel, graphite, charcoal, pastel), painting (oil, acrylic, watercolor), independent projects (choose subject and medium), ceramics (hand-building, throwing), and sculpture (additive, subtractive, found art). The course is designed to build on the knowledge and technical skills developed in Art II in order to strengthen individual portfolios.

726 Studio Arts III**Grade 12****(1 credit)****Prerequisite: Studio Art II and teacher recommendation.****(Sketchbook required)**

The course consists of independent projects designed by the student. This course is specialized for the serious art student interested in developing their portfolio for a career in the visual arts.

727 Multimedia**Grades 10, 11, 12****(1 credit)****Prerequisite: Application**

This course is recommended for students interested in a career that combines technology and communications. The course will allow students to implement the many aspects of video production in a team atmosphere to produce the daily announcements and the Friday afternoon *Weekend Blast Off*. Students will work in production teams to: develop interviews, skits and meet broadcast deadlines. All students will cycle through the production modules at specified intervals, with assignments and team responsibilities varying throughout the school year.

730 Photography**Grades 10, 11, 12****(1 credit)****Prerequisite: Studio Arts and Digital Camera Required****Lab Fee - \$25**

Photography is a year-long course designed for tenth, eleventh and twelfth grade art students. Photographers record and produce images that document the places and people that surround you. They also create many of the commercial images that drive the way we think, look and see the world. This course will focus on basic darkroom procedures for developing and printing black and white film, and investigating new technologies utilizing the digital image and the computer. In particular, students will learn about light, the pin-hole camera, different types of 35mm cameras (SLR, point/shoot, ABS), film technology, wet and dry printing techniques, special effects, the basics of Photoshop and the history of photography. Working in the darkroom and on the computer is an important component of this course. Students are required to have access to a digital camera.

731 Commercial Art**Grade 10, 11, 12****(1 credit)****Prerequisite: Studio Arts**

This course will focus on creating concepts and developing design while completing your projects. The class will convey your concepts through magazine covers, a personal logo, package design, photography, video editing and posters. We will also be working on the psychology of advertising, planning, design execution, and promotion of certain products or ideas. A segment on architectural design will also take place so that we may design the world that surrounds us. We will go step by step developing your projects so that you will be successful. The class will strengthen our skills at the art of presentation and craftsmanship. This course was developed for the creative person that may not be the artistic person. This course may appeal to the person going into marketing or business.

745 Advanced Multimedia**Grade 11, 12****(1 credit)****Prerequisite: Multimedia minimum grade 80%, teacher recommendation**

Advanced Video Production is a must for students that want to take their interest in video production to the next level. The course will focus on a more in-depth understanding of script writing, story boarding and the study of cinematography. The completed work will be used for broadcast and web applications. The class is expected to work in a team atmosphere to produce the Friday morning announcements, and enhance the high school web page on www.gorockets.org/. We will also work on short films to develop portfolio pieces required for colleges. Students will work in production teams to meet publication and broadcast deadlines. All students will cycle through the production modules at specified intervals, with assignments and team responsibilities varying throughout the school year.

Early Childhood Education Program

The Early Childhood Education Program is a three-year course designed for high school students in grades 10-12, with an emphasis in early childhood education. This is a college preparatory course that provides hands-on experiences with young children from 13 months through nine years old. Students learn principles of child development and gain an understanding of appropriate early childhood practice.

While completing the Early Child Education program at THS, the student will:

- Demonstrate knowledge of principles of child development and growth.
- Plan and prepare nutritious snacks for children which help meet recommended daily requirements.
- Participate in preschool program planning and management.
- Provide a safe child care environment for children in school.
- Practice positive behavior guidance for children.
- Demonstrate knowledge of signs of child abuse and neglect.
- Demonstrate knowledge of encouraging positive parent-child personal relationships.
- Plan age-appropriate learning experiences for children.
- Demonstrate knowledge of Pennsylvania laws, regulations and policies relating to child care centers and schools.

Facilities that students can be placed for lab experiences and internship/practicum:

- ECLC Pre-K and Kindergarten classrooms
- YMCA Tiny Footsteps
- Main Street Elementary
- YWCA Preschool Program

Early Childhood coursework includes:

- Child Development I
- Child Development II
- Child Development III

Family & Consumer Science Course Descriptions

860 Culinary Arts: Introduction to Baking **(1/2 credit)**

Grade 10, 11, 12

This introductory pastry and baking class will provide students with an understanding of the ingredients and methods used in creating breads, pastries, cookies, and other desserts. Students will learn how dairy, fruits, flour and chocolate come into play with pastry and baking. The fundamentals of dough and basic decorating skills are covered. The class also introduces students to baking equipment and costs.

861 Culinary Arts: Introduction to Cooking **(1/2 credit)**

Grade 10, 11, 12

This course is designed to introduce the student to all aspects of the professional kitchen, including equipment identification, basic culinary math, US standard and metric measuring system, knife identification, knife handling and sharpening, all culinary knife cuts, potato, egg, vegetable and grain cookery, as well as wet, dry and combination cooking methods.

862 Applied Culinary Arts **(1 credit)**

Grade 11, 12

Prerequisite: Culinary Arts: Introduction to Baking or Culinary Arts: Introduction to Cooking

This course is the advanced course in Culinary Arts. Skills will continue to be developed in the Culinary Arts: Introduction to Baking and Culinary Arts: Introduction to Cooking courses. Aspects of the food service industry will be introduced through classroom instruction. The combination of food preparation, guest speakers, field trips, and other activities will be used to prepare students for continuing on with their culinary arts education and careers.

869 Child Development I **(1 credit)**

Grade 9, 10, 11, 12

Prerequisite: None

Child Development I will introduce basic childcare, furnishing a safe, healthy, learning environment for children, nurturing children and learning about career options in child care and early childhood education. The first year of the Early Childhood Education program teaches theory and early childhood development.

870 Child Development II **(1 credit)**

Grade 10, 11, 12

Prerequisite: Child Development I

Child Development II will provide instruction in developing program goals and curriculum planning, preparing the learning environment, developing guidance skills, handling daily routines and guiding play. Students will have days of classroom instruction as well as days of field experience at the Early Childhood Learning Center.

871 Child Development III**Grade 11, 12****(1 credit)****Prerequisite: Child Development II**

Child Development III will continue where Child Development II left off in providing instruction in developing program goals and curriculum planning, preparing the learning environment, developing, guiding, and implementing Early Childhood Education lessons. Students will have days of classroom instruction as well as days of field experience at the Early Childhood Learning Center and other facilities mentioned above.

Service-Oriented Elective Course Descriptions

101 Stand Tall **(1 credit)**

Grade 9, 10, 11, 12

The students in this course promote positive decision making throughout the school. The members pledge to refrain from using drugs and alcohol. Students who are members of the Stand Tall organization also make anti-drug and alcohol presentations to our elementary school children through such programs as *On Applebee Pond*, *Kick Butts Day*, and *Through with Chew*. The students also participate in leadership conferences and workshops and sponsor special events and assemblies. The students will work cooperatively with drug and alcohol agencies to build effective prevention programs. Decisions Day is one example of programming students plan and coordinate.

102 Peer Helping **(1 credit)**

Grade 9, 10, 11, 12

Peer Helping is a school and community service oriented class. Students who sign up for this elective are expected to be outgoing and self-driven, because Peer Helping is a very student-centered class. Peer Helping students are required to volunteer time in the community and be ready to conduct peer mediations for students who need them at school. Service projects for Peer Helping include Trunk or Treat and the Angel Tree programs. The mission of the class is to be there in times of need for the community and school through a variety of programs and activities.

904 Service Learning **(1 credit)**

Grade 12

Service Learning can be taken as a nine weeks, semester, or yearlong course. It is a course in which students may volunteer on short-term and/or long-term projects within the high school building or nearby community. Students are encouraged to choose a volunteer assignment which matches their interests and fulfills a legitimate need. Students must report to their assignment daily, attend quarterly meetings, and complete periodic reflection assignments. Responsibility, self-management, and a good work ethic are required for this course.

Technology Education Course Descriptions

821 Fundamentals of Technology **(1 credit)**

Grade 9, 10, 11, 12

Students will utilize computer aided drawing and design equipment to produce various single and multi-view drawings and design technological systems (e.g. informational and physical). This is an activity-based course that will involve the application of tools, materials and processes of communication, manufacturing, construction and transportation. Students will utilize problem-solving techniques to examine the ways materials, energy and information are processed to transmit information, build structures, manufacture products and move people and freight. Sample activities include the design of a balsa wood bridge, CO2 powered car, and boat hull.

822 Computer Aided Drafting-CAD **(1 credit)**

Grade 10, 11, 12

Students will use the computer to produce technical drawings through the use of a variety of CAD software. Areas of study will include entry methods, coordinate systems, printing and plotting methods, exporting and importing drawings, basic dimensioning techniques and selection of proper drawing type. Using these techniques you will be involved in designing and drawing various objects ranging from buildings and building components to mechanical devices.

825 Construction Technologies **(1 credit)**

Grade 9, 10, 11, 12

Students enrolled in Construction Technologies will learn residential construction methods and technologies along with various home repair methods. Wall framing, electrical wiring, thermal insulation, interior wall finishing and the codes that must be followed will be experienced in this course.

826 Manufacturing **(1 credit)**

Grade 10, 11, 12

Prerequisite: Fundamentals of Technology-must have min. of 75%

Students enrolled in this course will learn the process of project design, material selection, material purchasing, wood joinery and finishing. Each student will complete the process of designing a project that is to be manufactured by that student. The student will also participate in the development of a product to be mass produced by the class. Sample products from past classes include an Adirondack chair, stool, jewelry box, cd rack and tool box.

828 Metal Tech I **(1 credit)**

Grade 9, 10, 11, 12

The students will learn safe and proper fundamental machining practices on the milling machine, grinder, and lathe through the production of instructor-designed projects. Studies will also include the development and transmission of power. Various problem solving activities, and the production of several hand tools will be the primary activities of the class.

829 Metal Tech II

Grade 10, 11, 12

(1 credit)

Prerequisites: Metal Tech I, must have min. of 75% in each course

Project planning, material selection, layout work, machine set-ups including selection of feeds and speeds, proper machining techniques, precision measurement, quality control and heat treatment will be studied through the production of various items.

830 Metal Tech III

Grade 12

(2 credits)

Prerequisites: Metal Tech II, must have min. of 75%

Total workspace readiness will be stressed. This will range from work ethics to total product production planning, manufacturing and inspection. Areas of study will include CNC programming, set-up and machining as well as job shadowing and co-op opportunities. Field trips, guest speakers and satellite learning opportunities will be available.

Health and Physical Education Course Descriptions

949 Wellness Education **(1 credit)**

Grade 9, 10, 11, 12

A selective physical education program is offered at this level. Students will select from units that include; fitness, lifetime, team and recreational activities. One (1) aquatic selection must be completed during the freshman and junior year. Health topics such as body systems, wellness, substance abuse, sexually transmitted diseases, AIDS, first aid, CPR, decision-making and goal-setting, addiction and health careers will be offered. Students are required to participate in three (3) grade specific health selections per year in grades 10, and 11 and two (2) health selections in grade 12.

950 Strength and Conditioning **(1 credit)**

Grade 10, 11, 12

This course will provide students who strive for a higher level of performance in sports, or life in general, the opportunity to engage in activities that will increase their physical fitness. It will provide athletes with an opportunity to work on athletic performance and non-athletes to develop a heightened sense of fitness. The goal of this course is for students to enjoy the benefits of daily strength and conditioning. Some of the benefits for students are injury prevention, improved performance, enhanced general health, increased bone density, improved posture, improved mood, increased muscle mass and metabolism and faster recovery after injury. This course is meant to take the place of regular physical education and will focus on strength and conditioning rather than many of the traditional games and lifetime activities that are normally performed. Students will still be required to complete their required health units while participating in the class.

953 Lifeguarding **(1 credit)**

Age 15 & older

Prerequisites: See Description

In order to request this course, students must be able to swim 300 yards continuously in the following order: 100 yards crawl stroke, 100 yards breast stroke and 100 yards stroke of swimmer's choice; swim 20 yards, submerge to minimum depth of 8 feet, retrieve a 10-pound object, and return with it to the surface and swim another 20 yards with the object using only the legs. Students will demonstrate the ability to perform these skills before the end of the current school year. In addition to the prerequisites, students should also have good reading skills as extensive bookwork and written testing is included. A lab fee will be charged for this course.

Venango Technology Center

The enrollment of students at Venango Technology Center is completed through an application process. Attitude, attendance, and discipline records are all considered very highly in the selection process.

While attending the technology center, the student will be expected to be a responsible individual who is developing a skill that will ensure success in the world of work. The school is for the student. If the student works to their ability, cooperates with instructors and fellow students, learns and uses good work habits; success at the technology center will be assured, and success in the world of work will be the result. Good attitude, good attendance, and good behavior are essential.

For students planning to enter Vo-Tech for the first time, an application will be required. These applications will be made available to students as they declare an interest in VTC in the spring of each year. These applications are forwarded to Vo-Tech Center leadership for review. The application process is competitive. Attendance, grades, and discipline history are taken into consideration.

If there are any further questions, or you wish additional information, contact The Titusville High School guidance office or the Venango Technology Center at 677-3097 Ext. 1137.

Eligibility for the Venango Technology Center

Students in Grade 9 must successfully complete English, Social Studies, Math, Science, and Physical Education.

Students must pass all their required courses. For some required courses there is not an opportunity to remediate failed classes in summer school.

All classes in which Venango Technology students are enrolled at Titusville meet the requirements for graduation.

SOAR: Students Occupationally & Academically Ready

Students Occupationally & Academically Ready (SOAR) is the career and technical Program of Study (POS) educational plan that articulates the high school career and technical programs to postsecondary degree or diploma or certificate programs. SOAR programs lead students into a career pathway that align the high school courses to a postsecondary program to complete a degree or certificate.

The main steps you need to take are:

- Sign up for a career and technical education program and finish the program
- Earn a high school diploma
- Achieve a minimum 2.5 grade point in your career and technical education program
- Achieve competent or advanced level on the NOCTI
- Achieve proficiency on all tasks in the approved Task List

If you achieve those requirements then there may be colleges all over Pennsylvania that will award you college credit for the work you did in high school. For more information, please visit: <https://www.collegetransfer.net/Search/PA-Bureau-of-CTE-SOAR-Programs>

Vocational Courses

- 960B** Auto Body Repair Technology
- 960C** Automotive Technology
- 960D** Building Construction Technology
- 960E** Culinary Arts
- 960G** Computer Aided Drafting & Design
- 960I** Allied Health Occupations
- 960J** Machine Tool Technology
- 960L** Computer Information Systems
- 960M** Welding Technology
- 960N** Electronics Technology
- 960O** Natural Resources
- 960R** Building and Property Maintenance Technology
- 960S** Protective Services
- 960U** Dental Assistant
- 960V** Heating, Ventilation, & Air Conditioning
- 960W** Heavy Equipment Repair Technology
- 960Z** Early Childhood Education

Venango Technology Center Articulation Agreements

CIP Code	CIP Title	VTC Program Name	Articulation Agreement
1.0601	Applied Horticulture/Horticultural Operations, General	Natural Resources	Butler County Community College BC3
12.0508	Institutional Food Workers	Culinary Arts	Pittsburgh Technical College PTC
15.0303	Electrical, Electronic and Communications Engineering Technology/Technician	Electronics Technology	Precision Manufacturing Institute PMI
			Triangle Tech
			Butler County Community College BC3
			Pittsburgh Technical College PTC
15.1301	Drafting and Design Technology/Technician, General	Computer Aided Drafting & Design	Triangle Tech
			Butler County Community College BC3
			Pittsburgh Technical College PTC
43.9999	Homeland Security, Law Enforcement, Firefighting and Related Protective Services, Other	Protective Services	Clarion University of PA
			Pennsylvania College of Technology
			Pittsburgh Technical College PTC
46.9999	Construction Trades, Other	Building Construction Technology	Triangle Tech
47.0604	Automobile/Automotive Mechanics Technology/Technician	Automotive Technology	Pittsburgh Technical College PTC
			University of Northwestern Ohio
47.0613	Medium/Heavy Vehicle and Truck Technology/Technician	Heavy Equipment Repair Technology	University of Northwestern Ohio
48.0501	Machine Tool Technology/Machinist	Machine Tool Technology	Thaddeus Stevens College of Technology
			Precision Manufacturing Institute PMI
48.0508	Welding Technology/Welder	Welding Technology	Ohio Technical College OTC
			Precision Manufacturing Institute PMI
			Triangle Tech
			Pittsburgh Technical College PTC
51.0899	Health/Medical Assisting Services, Other	Allied Health Occupations	Butler County Community College BC3
52.1201	Management Information Systems, General	Computer Information Systems	Butler County Community College BC3
			Pittsburgh Technical College PTC

TECHNOLOGY CENTER CURRICULUM

Grade 9

Period Course

1	English 9
2	American Cultures I
3	Physical Science 9
4	Math
5	Physical Education
6	General Elective
7-8	General Elective
9	Directed Learning

(9th grade students must pass five core credits to attend Vo-Tech in 10th grade)

Grade 10

Period Course

1	English 10
2	Math
3	American Cultures II
4	Wellness Education
5-9	Technology Major

Grade 11

Period Course

1	English 11
2	Biology
3	Math
4	Wellness Education
5-9	Technology Major

Grade 12

Period Course

1	English 12 or Acad Eng 12
2	American Studies III/Personal Finance
3	Science
4	Wellness Education
5-9	Technology Major

Venango Technology Center Course Descriptions

960B Auto Body Repair Technology

The student learns the following skills: MIG welding, use of hand tools, collision and plastic repair, refinishing & painting techniques, and damage estimating. The auto body student will analyze damage to uni-body structures, look up manufacturer's paint codes, and mix the correct colors of paint. A state of the art down draft spray booth is available for the development of refinishing skills.

960C Automotive Technology

New students learn automotive maintenance including the following: brake work, tire changing & repair, wheel balancing, oil changes, lubrications, exhaust systems, and electrical systems, analysis of engine problems, adjustment, repair, and replacement of faulty parts. The students also learn engine tune-up, engine overhaul, steering systems, wheel alignments, fuel injection theory, drive-ability, and repair.

960D Building Construction Technology

This course begins with an emphasis on the safe use and care of hand tools and power tools. Rough framing, roof framing, exterior finish, interior finish, and stair building are taught and the learning is culminated with the construction of an actual full-scale house. Electrical wiring, plumbing, dry wall application and masonry are also taught. Trade mathematics, estimating, and blueprint reading are major units of the course.

960E Culinary Arts

The culinary arts department is divided into two phases: chef training (including baking) and waiter/waitress training. The chef training emphasizes food service and bakery operation; including banquet service, buffets, fast food preparation, and institutional food service. The waiter/waitress program stresses proper customer service, table setting, reading and describing a menu, and cash register operation.

960G Computer Aided Drafting & Design (CADD)

The CADD curriculum prepares the student for entry-level skills as a mechanical/architectural draftsman. Basic drafting fundamentals on the drafting board, applied mathematics and basic geometry, and computerized drafting (CAD) comprise the Computer Aided Drafting & Design curriculum. The CAD equipment is personal computer based with the latest version of AutoCAD, Architectural & Mechanical Desktop, Inventor Series professional, and Revit Building programs.

960I Allied Health Occupations

This program is designed to prepare the students for a career in the health care field caring for patients in hospitals, nursing homes, and home care. Students learn CPR, First Aid, medical terminology, and how the body works.

960J Machine Tool Technology

Blueprint reading, understanding instructions, and mental alertness, with good eye-hand coordination are necessary ingredients for the machine tool technology area. Machine work includes: lathe, milling machine, heat-treating, bench work, drill press, grinder, and band saw. In addition, the student is exposed to a computerized numerically controlled (CNC) milling machine and a computerized turning center. This enables the student to learn current technology as it relates to computer-controlled machinery.

960L Computer Information Systems (CIS)

The first year is devoted to introducing students to computer concepts and terminology, general business applications with Microsoft Office, computer programming, web site development, and 2D animation. The second-year students learn how to analyze common hardware/software/networking processing, problems, and preformation issues, integrate common preventive maintenance techniques, and identify cyber law and digital forensics by using computer forensics techniques. Third year students will concentrate on multimedia development, 2D video game development, and 3D animation commonly seen in video games and motion pictures.

960M Welding Technology

The course deals with blueprint reading, hand tools, brazing, using oxygen/acetylene torches, shielded metal arc (stick) welding, gas metal arc (M.I.G.), gas tungsten arc (T.I.G.) welding, and flux core arc welding (FCAW) in various test positions. The student will cut metals using a variety of cutting processes. Students will practice and have the opportunity to obtain certifications under American Welding Society codes. Safety is stressed throughout the course.

960N Electronics Technology

Students study electrical and electronic circuits, audio and digital electronics, microprocessors, robotics systems, copper cabling, fiber optics, and computer servicing and troubleshooting. Students operate voltmeters, oscilloscopes, and other specialized equipment. Students will also receive instruction in programmable logic controllers and industrial motor controls. Students will build their own lab trainer, multi-meters, and other electronic projects. A prior course in algebra is helpful, but not required.

960O Natural Resources

A combination of subject matter and planned learning experiences dealing with conservation and natural resources such as air, forests, soil, water, fish, plants, and wildlife is a part of this course. Students are able to explore careers in forestry, horticulture, landscaping, recreational land use, environmental protection, and a variety of related careers. The four main areas of the program are: forestry, landscaping, horticulture, and greenhouse operation.

960S Protective Services

This program provides a great start for students who choose to pursue higher education in their chosen field. Students will also learn skills that enable them to walk-on to several entry-level jobs that are in high demand in our area and across the United States. Students will develop the mental, physical, and moral attributes to be successful in the Protective Services fields, including Law Enforcement, Fire, and Emergency Medical Services. Students will engage in a daily regimen of physical fitness and will be required to maintain uniforms

960U Dental Assisting

Dental Assistants carry out a wide variety of jobs within a private dental office, clinic, or hospital setting. Dental Assistants work alongside the dentist to provide a second pair of hands while giving comfort to the patient. Some of these jobs include, greeting patients, preparing procedure trays, mixing required dental materials, evacuation of fluids and the transfer of instruments, and instrument sterilization. They also give oral hygiene instructions along with pre-and post-operative instructions and nutrition counseling.

960V Heating, Ventilation, & Air Conditioning (HVAC)

This is an instructional program that prepares individuals to apply technical knowledge and skills to install, repair and maintain commercial and domestic heating, air conditioning and refrigeration systems. Instruction includes theory and application of basic principles involved in conditioning of air (cooling and heating); filtering and controlling humidity; operating characteristics of various units and parts; blueprint reading; use of technical reference manuals; the diagnosis of malfunctions; overhaul, repair and adjustment of units and parts such as pumps, compressors, valves, springs, and connections; and repair of electric, electronic and pneumatic control systems.

960W Heavy Equipment Repair Technology

This program prepares individuals to apply technical knowledge and skills to the specialized maintenance and repair of trucks, buses, and other commercial and industrial vehicles. It includes instruction in diesel engine mechanics, suspension and steering, brake systems, electrical and electronic systems, preventive maintenance inspections, drive trains, HVAC systems, and auxiliary equipment installation and repair.

960Z Early Childhood Education

This program focuses on the provision and management of childcare services. Students will be prepared to plan, design, and manage childcare facilities and programs that meet children's developmental needs and interests. Students will also learn how to provide safe and healthy environments. The program includes instruction in child development and psychology; home and institution-based childcare; identification of diseases, injuries, and psychological trauma and applicable referral. Topics include parent relations, personnel and business management principals and related laws and policies.

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Student Scheduling Catalog
Printed January 2025

