

THOMAS JEFFERSON HIGH SCHOOL



2025-2026 PROGRAM OF STUDIES

COURSE SELECTIONS
FOR GRADES 9 - 12

THOMAS JEFFERSON HIGH SCHOOL ALMA MATER

Now our high school we are praising,
With our hearts so true
Black and gold our banners waving
Loyal e'er to you!
Moulder of our lives to come
Mentor of our youth,
Alma Mater, Alma Mater
Thomas Jefferson



THOMAS JEFFERSON HIGH SCHOOL

2025-2026

PROGRAM OF STUDIES

Superintendent

Dr. Janet Sardon

Assistant Superintendent

Dr. William Henderson

Supervisor of Special Education/Pupil Personnel

Dr. Cassandra Bozek

High School Administration

Mr. Pete Murphy, High School Principal
Dr. Adam Knaresborough, Assistant Principal
Dr. Erikka Kuhse, Assistant Principal
Mr. William Cherpak, Athletic Director
Ms. Ashley Bellovich, School Nurse
Mrs. Jennifer Allan, Administrative Secretary
Ms. Crystal Ross, Administrative Secretary
Mrs. Melissa Dusak, Athletic Secretary/Nurse's Secretary

Technology

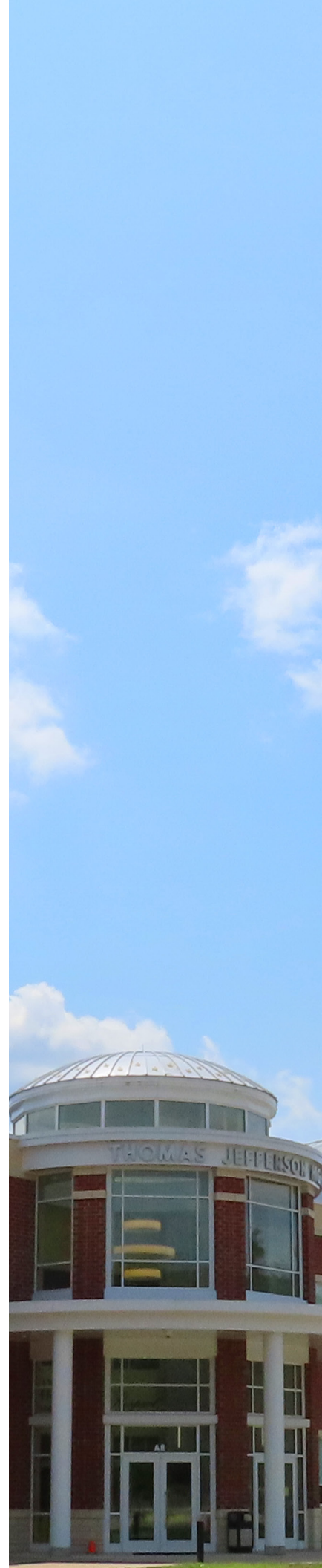
Dr. Jennifer Kassimer, Director of Technology and Innovation
Mr. Andrew Sanders, Network Engineer
Mr. Doug Bricklemeyer, Technology Assistant
Mr. Bryan Nigut, Technology Assistant

High School Counseling Department

Ms. Carly Rimel, Counselor (A – G)
Mrs. Regina Slater, Counselor (H – O)
Mr. Michael Kilcoyne, Counselor (P – Z)
Mrs. Michelle Lander, Social Worker
Mrs. Charlotte Bricklemeyer, Attendance Secretary
Mrs. Lynne Haggerty, Counseling Secretary



The information contained in this handbook is intended to provide a guide to students, parents and staff. The handbook should be read in conjunction with the adopted policies of the School District. The policies of the School District will prevail in the event of any conflict between those policies and provisions of the handbook. Any such conflicts are inadvertent.



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English Summer Reading
ENGLISH COURSES
English 9 (LA1105)
Honors English 9 (LA1106)
English 10 (LA1110)
Honors English 10 (LA1112)
English 11 (LA1117)
(AP) Advanced Placement English: Language and Composition (LA1119)
English 12 (LA1124)
Honors 12th Grade Literature (LA1120)
Honors 12th Grade Composition (LA1121)
(AP) Advanced Placement English: English Literature and Composition (LA1129)
ELECTIVE ENGLISH COURSES
Print Journalism - Yearbook (LA1148)
Reading in the Dark: Film as Literature (LA1158)
Introduction to Film Criticism (LA1157)
CHS Introduction to Public Relations (LA1146)
CHS Journalism (LA1147)
Theater Production: From the Page to the Stage (LA1153)
CHS Public Speaking (LA1143)
Theater Orientation (LA1152)
Comic Books & Graphic Novels (LA1149)
CHS Integrated Marketing Communications (Formerly Digital Media) (LA1151)
MATHEMATICS COURSES
Pre Algebra (MA1300)
Algebra I (MA1301)
Geometry (MA1304)
Honors Geometry (MA1305)
Algebra II (MA1302)

Algebra II B (MA1302B)
 Honors Algebra II (MA1303)
 Algebra III/Trigonometry (MA1323)
 Pre-Calculus/Trigonometry (MA1320)
 Honors Pre-Calculus/Trigonometry (MA1322)
 Calculus (MA1324)
 CHS Business Calculus (MA1325)
 (AP) CHS Advanced Placement Calculus AB (MA1326)
 (AP) CHS Advanced Placement Calculus BC (MA1327)
 Probability and Statistics (MA1340)
 (AP) Advanced Placement Statistics (MA1341)
 Keystone Algebra (MA100)
 SCIENCE COURSES
 BIOLOGY COURSES
 Biology (SC1410)
 Honors Biology (SC1409)
 (AP) Advanced Placement Biology (SC1426)
 Principles of Biology (SC102)
 CHEMISTRY COURSES
 Physical Science (SC1401)
 Chemistry (SC1417)
 Honors Chemistry (SC1415)
 (AP) Advanced Placement Chemistry (SC1427)
 PHYSICS COURSES
 Physics (SC1423)
 (AP) Advanced Placement Physics 1 (SC1422)
 (AP) Advanced Placement Physics 1 & 2 (SC1430)
 (AP) Advanced Placement Physics C (SC1428)
 ADDITIONAL SCIENCE COURSES
 Environmental Science (SC1419)
 (AP) Advanced Placement Environmental Science (SC1420)
 CHS Anatomy and Physiology (SC1429)
 Introduction to Astronomy (SC1405)
 SOCIAL STUDIES COURSES
 SOCIAL STUDIES SEQUENCE
 SOCIAL STUDIES COURSES
 9th GRADE
 Civics and Government (SS1203)
 Honors Civics and Government (SS1204)
 10th GRADE
 World History (SS1205)
 (AP) Advanced Placement World History (SS1206)
 11th GRADE
 United States History (SS1209)
 (AP) Advanced Placement U.S. History (SS1229)
 ELECTIVE SOCIAL STUDIES COURSES
 (AP) CHS Advanced Placement Psychology (SS1232)
 (AP) CHS Advanced Placement European History (SS1231)
 Economics (SS1220)
 Law I (SS1233)
 Law II - Trial Advocacy (SS1237)
 Psychology (SS1235)
 CHS Shaping the Modern World (SS1236)
 Sociology (SS1234)
 (AP) Advanced Placement US Government and Politics (SS1238)
 BUSINESS AND INFORMATION TECHNOLOGY

BUSINESS AND IT COURSES

Accounting I (BU1350)
Accounting II (BU1351)
Accounting III (BU1352)
(AP) Advanced Placement Computer Science (BU1359)
C/C++ Programming for Engineering and Artificial Intelligence (BU1365)
CHS Incubatoredu – Entrepreneurship (BU1360)
Cyber Forensics (BU1361)
Exploratory Business (BU1357)
Marketing (BU1363)
Personal Finance (BU1364)
Python - Introduction to Programming (BU1356)
Retail Management (BU1354)
Business Computer Fundamentals (BU1353)
Apple Swift X-Coding IOS App, AR/VR Programs (BU1366)

TECHNOLOGY EDUCATION

Architecture (TE1861)
Construction Technology (TE1857)
Engineering (TE1867)
Robotics/Drones (TE1869)
Tech Lab (TE1866)
Theater Construction and Technology (TE1852)
Introduction to TJTV (TE1870)
Advanced TJTV (TE)
Commercial Design (TE1853)

WORLD LANGUAGES

French Courses
French I (WL1508)
French II (WL1510)
French III (WL1512)
CHS French III (WL1513)
CHS French IV (WL1515)
(AP) CHS Advanced Placement French (WL1514)
Spanish Courses
Spanish I (WL1516)
Spanish II (WL1518)
Spanish III (WL1520)
CHS Spanish III (WL1521)
CHS Spanish IV (WL1525)
(AP) CHS Advanced Placement Spanish (WL1522)
Hispanic Culture and Spanish Conversation (WL1524)

FAMILY AND CONSUMER SCIENCE

Adult Living (FC1804)
Child Development Theory (FC1802)
Nursery School (FC1803)
Fabric, Fashion, and Design I (FC1811)
Advanced Fabric, Fashion, and Design II (FC1812)
Advanced Fabric, Fashion, and Design III (FC1813)
Foods and Nutrition (FC1805)
Interior Design (FC1806)
Introduction to Family and Consumer Science (FC1801)

FINE ARTS

ARTS AND CRAFTS COURSES

Art I (AR1910)
Art II (AR1916)
(AP) Advanced Placement Art: Drawing Portfolio (AR1918)

Basic Graphic Design (AR1902)
 Ceramics Studio I (AR1903)
 Advanced Ceramics - Wheel Throwing (AR1922)
 Advanced Ceramics - Handbuilding (AR1923)
 Creative Studio Media (AR1914)
 Crafts & Mixed Media Arts (AR1901)
 Photography/Video Production (AR1908)
 Sculpture (AR1917)
 Commercial Design Art (AR1921)
 MUSIC
 MUSIC COURSES
 Music Theory and History (MU1954)
 Music Theory II (MU1955)
 INSTRUMENTAL MUSIC PROGRAM
 MARCHING BAND
 Honors Symphonic/Marching Band (MU1941)
 Marching/Concert Band (MU1951)
 Jazz Ensemble (MU1942)
 Strings Ensemble (MU1959)
 Percussion Ensemble (MU1949)
 Varsity Choir (MU1930)
 Concert Choir (MU1953)
 A Cappella Choir (MU1940)
 Show Choir (MU1932)
 PHYSICAL EDUCATION AND HEALTH
 PHYSICAL EDUCATION AND HEALTH COURSES
 Foundations of Health and Safety (Elective) (PE1717)
 Physical Education 9 (PE1709)
 Health/Physical Education 10 (PE1710)
 Competitive Team Games 11/12 (PE1719)
 Individual Fitness & Lifetime Activities 11/12 (PE1720)
 Sports Theory and Applications (PE1716)
 Partners in PE (PE1715)
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 COLLISION REPAIR AND REFINISHING (ST1639)
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SERVICES FOR GIFTED STUDENTS
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CAREER CLUSTERS

ACCREDITATION

PENNSYLVANIA DEPARTMENT OF EDUCATION

It is the policy of the West Jefferson Hills School District not to discriminate on the basis of sex, handicap, age, race, color, and national origin in its educational and vocational programs, activities, or employment as required by Title IX, Section 504 and Title VI.

For information about your rights or grievance procedures, contact the Title IX Coordinator/Section 504 Coordinator, at this telephone number:

(412) 655-8450 or at this address:

West Jefferson Hills School District
830 Old Clairton Road
Jefferson Hills, Pennsylvania 15025
www.wjhsd.net

FOREWORD

This handbook is issued to help acquaint students with the course offerings and to enable them to plan wisely the remainder of their high school careers. It is intended to provide students and parents with information about school practices and policies; to assist students in making choices consistent with the students' aptitudes and interest; to enable students to utilize their abilities; and to encourage them to make the best decisions relative to their post-high school plans.

Students and their parents are strongly urged to consult the counselors or other school officials for assistance in interpreting the available information as to aptitudes, interest and limitations; for educational and vocational information; and for help in planning subject selections. We endeavor to regard students as individuals in their own right, entitled to help and guidance in understanding themselves. Group and individual conferences will be held with all students. The Program of Studies is intended to meet the needs of each student, and should be read in terms of future educational goals. Parents should feel free to call the school at (412) 655-8610 for any questions that may arise.

This book is updated annually. Parents and students are encouraged to check on line each school year for the updated versions at the Thomas Jefferson High School link at www.wjhsd.net.

MISSION STATEMENT

Students are the primary focus of the West Jefferson Hills School District where, in partnership with families and community, the mission is to educate and prepare all students to become active, contributing members of society by providing a challenging, innovative, and educational program guided by an exceptional staff in a safe, positive, caring environment, all of which promote excellence.

VISION STATEMENT

In the West Jefferson Hills School District, we advocate for our students by providing instruction that enables them to achieve high academic standards, and by developing relationships with them, their families, and each other that create caring, safe schools where students are valued.

- Our students all achieve high academic standards.
- Our student achievement of high standards includes curricular, artistic, vocational, athletic, and extra-curricular goals.
- We coordinate curriculum across and between grade levels, programs, and buildings.
- Our students are active learners.
- We recognize documented teacher observation over time as an effective form of student assessment.
- Our staff members are highly qualified and maintain their excellence through continued professional growth.
- We partner with higher education.
- Our district's staff members relate to students, their families, and each other in ways that convey compassion, understanding, respect, and interest.

- We honor the traditions of our past: academic, athletic, and extra-curricular.
- Our facilities are of a quality and nature that support and encourage district programs and goals.
- Our community understands and supports our district's programs and goals.
- We accept our role in the economic growth and well-being of our community.

BELIEF STATEMENTS

WE BELIEVE

- The learning and the educational development of individuals are collaborative efforts involving students, family, school and community.
- High expectations promote high achievement.
- Individuals are responsible for their actions.
- The family is a primary influence and motivator for the student.
- Students are the primary focus of the school system.
- Everyone learns at different rates and in different ways.
- All students have an equal opportunity for an education in which they are encouraged to develop their potential.
- Effective learning takes place in a safe, positive and caring environment where respect for others is demonstrated.
- Education involves an interdisciplinary process.
- Learning involves acquiring basic academic knowledge, skills and the ability to analyze, interpret, apply, synthesize and evaluate.
- Education provides skills to enable all students to participate in a lifelong process of learning in a changing world.
- Quality education includes activities inside and outside of the classroom.
- An effective educational program requires giving an exceptional staff a voice in the educational process and providing them with consistent and planned professional development opportunities.
- Advancements in technologies impact knowledge and education.
- Quality public education is essential for a thriving community and requires shared fiscal responsibility.
- Effective communication among school, family, students and community is vital throughout the educational process.

WEST JEFFERSON HILLS SCHOOL DISTRICT CORE VALUES

PERSONAL CORE VALUES

EMPATHY

Our commitment is to listen deeply before jumping to conclusions. We will work to understand first.

We will seek first to understand before being understood...

RESPECT

Our commitment is to earn the respect of others by building trust, honoring differences, and celebrating diversity. We are in this together!

We will expect the best of others by treating them the way we would want to be treated...

INTEGRITY

Our commitment is to model high moral behavior by being honest, fair, and forthcoming with ALL our interactions.

We will do the right thing AND we will do things right...

DISTRICT CORE VALUES

PERSONALIZATION/CUSTOMIZATION SYSTEM

We believe that the future of education will be characterized by a customized and highly personalized system where the instructional methodologies are optimized for the needs of each learner.

Every learner, every day

LEARNER CENTRIC FOCUS

Decisions about people, policies, practices, and structures are decided by focusing on what is best for the learners.

Keeping Learners First

FOSTERING POSITIVE RELATIONSHIPS

We know positive relationships have the power to unleash untapped potential in people.

Honoring and Affirming Others

ACADEMIC STANDARDS AND OBJECTIVES

Instruction in the high school program shall focus on the development of abilities needed to succeed in work and advanced education through planned instruction. Curriculum and instruction in the high school program shall provide all students opportunities to develop the skills of analysis, synthesis, evaluation and problem-solving, as well as information literacy. Planned instruction in the following areas shall be provided to every student in the high school program. Planned instruction may be provided as a separate course or as an instructional unit within a course or other interdisciplinary instructional activity.

1. Students will study language arts, integrating reading, writing, listening, speaking, literature and grammar.
2. Students will study mathematics, including algebra, geometry, probability and statistics, logical reasoning, and discrete math.
3. Students will study science and technology, including participation in hands-on experiments and at least one laboratory science chosen from life sciences, chemical sciences, and physical sciences.
4. Students will study social studies to include civics and government, economics, geography and history, the history and cultures of the United States, the Commonwealth and the world.
5. Students will study the arts, including art, music, theater and humanities.
6. Students will study the use of applications of microcomputers and software, including word processing, database, spreadsheets and telecommunications; and information skills, including access to traditional and electronic information sources, computer use and research.
7. Students will study health, safety and physical education, including instruction in concepts and skills which affect personal, family and community health and safety, nutrition, physical fitness, movement concepts, motor skill development, safety in physical activity settings, and the prevention of alcohol, chemical and tobacco abuse.
8. Students will study family and consumer science, including principles of consumer behavior and basic knowledge of child health and childcare skills.

The following planned instruction shall be made available to every student in the high school program:

1. Vocational-technical education
2. Career education and work
3. World languages
4. Technology education, incorporating technological problem-solving and the impacts of technology on individuals and society
5. College-level advanced placement courses

SUPPORTIVE PROGRAMS

SPECIAL EDUCATION SERVICES

Special Education services are provided to all students in accordance with the Individuals with Disabilities Education Act (IDEA) and PA Chapter 14 Programs and Services. A student with a disability means a student who, as the result of a multidisciplinary evaluation is determined to meet the criteria in one of more of the following 13 categories: intellectual disability, hearing, deafness, speech or language impairment, a visual impairment including blindness, emotional disturbance, orthopedic impairment, autism, traumatic brain injury, other health impairment, specific learning disability, deaf-blindness or multiple disabilities and who is determined to be in need of special education and related services. Special education services are provided based on the primary educational needs of the student, not the category of the disability. Related services are designed to enable the student to access or participate in educational programs. Related services may include speech and language therapy, physical therapy, occupational therapy audiology, orientation & mobility, assistive technology, psychological counseling, social work, nursing services and parent training. The services provided at Thomas Jefferson Senior High School include:

- **Emotional Support** - These services are designed to meet the needs of students who need assistance with emotional, behavioral and social needs that have an adverse impact on their learning.
- **Hearing Support** - Students with a hearing impairment, including deafness are provided with appropriate services and support to enable them to access and fully participate in the curriculum.
- **Learning Support** - Services provided to students who have an identified need in understanding or in using language (spoken or written), reading, writing or mathematics. Accommodations and modifications may be provided to the general curriculum or through more intensive interventions may be necessary to meet the needs of individual students.
- **Life Skills Support** - Life Skills Support is designed to provide a continuum of services for students with intellectual disabilities and students whose social/behavioral skills are significantly delayed. These students require instruction in daily living skills in addition to receiving instruction in ELA, Mathematics, Science and Writing utilizing the Alternate Eligible Content that is aligned to the PA Core Standards. A primary goal of the Life Skills Support program is to grow a student's social/emotional development, communication, functional and vocational skills and provide Community Based Instruction (CBI) in order to increase the level of independent functioning.
- **Speech and Language Support** - Services are provided to students who demonstrate a need in the areas of articulation, language, auditory processing and fluency. The service is provided through various models including, push-in, and pull-out individual and small groups.
- **Vision Support** - Students with a visual impairment, including blindness are provided with appropriate services and support to enable them to access and fully participate in the curriculum.

GIFTED SUPPORT

The goals and focus of gifted support services at Thomas Jefferson High School are to support intellectually gifted students throughout their high school enrollment and to provide college and career planning assistance. The program also addresses both the general and specific needs of each student through activities such as Honors and Advanced Placement courses, seminars, competitions, summer workshops, and shadowing/apprenticeship opportunities. Students are kept apprised of information and opportunities via TJTV, PA announcements, the Gifted Google Classroom, and Students are encouraged to sign up for all events which meet their strengths, abilities and interests as determined by their individual GIEP.

LIFE SKILLS

The Life Skills Support program is designed to provide a continuum of services for students with intellectual disabilities and students whose social/behavioral skills are significantly delayed. These students require instruction in daily living skills in addition to receiving instruction in English, Mathematics, Science and Writing utilizing the Alternate Eligible Content that is aligned to the PA Core Standards. A primary goal of the Life Skills Support program is to grow a student's social/emotional development, communication, functional and vocational skills and provide Community Based Instruction (CBI) in order to increase the level of independent functioning.

Students will continue to work on the acquisition of new academic skills and focus on the following five domains of daily living skills:

- Personal Maintenance-personal hygiene and grooming
- Social/Behavioral Skills-understanding emotions, social interaction and responsible behavior
- Recreation & Leisure-exploring interests, hobbies, physical fitness, participation in sports/clubs
- Functional academics-skill development in math, English-language Arts, Science & Writing
- Vocational skills-career exploration, work behaviors/skills, interests and work expectations

The sequences of skills are developed and practiced across settings and are based on the individual needs of each student.

COUNSELING SERVICES

SCHOOL COUNSELORS

The School Counselors are here to assist you in your endeavors throughout high school. The functions of the counselors will be unique to each student's needs. However, the primary goal of counseling at Thomas Jefferson will be to meet the developmental needs of students in the educational system for the realization of their maximum potential. Parents are encouraged to make appointments when necessary to speak with the counselor. The functions of the counselors are varied. The following identify some of the services/activities that are rendered:

1. Provide individual counseling to students
2. Consult with school staff regarding students
3. Implement a system of student records
4. Establish orientation activities
5. Organize informational resources to provide a basis for students to make educational/vocational decisions
6. Administer and interpret the testing program
7. Serve as liaison with community agencies
8. Provide assistance for educational and vocational placement and planning
9. Serve as a liaison to teachers for students and parents
10. Disseminate information pertinent to student's career planning (i.e., open house programs, scholarships, etc.)

SOCIAL WORKER

The West Jefferson Hills School District has a Licensed Social Worker as a part of the Thomas Jefferson High School Faculty. The primary role of the Social Worker includes individual and group supportive counseling with students. In the office of the Social Worker, students are able to discuss emotional, social and academic concerns in a safe and confidential environment. These services may also include, but are not limited to, anger management, grief counseling, crisis intervention, and conflict resolution.

All students at Thomas Jefferson High School have the opportunity to meet with the Social Worker as necessary. Referrals to the Social Worker can be made by teachers, administration, parents, or through the Student Assistance Team. Students are also able to self-refer or refer a friend if they are in need of support. Once referred, the Social Worker will determine the level of need for each individual student. Not all students will receive services on an ongoing basis. These services are not clinical in nature and cannot take the place of an outpatient mental health clinician. If further support is needed, the Social Worker will act as a liaison by assisting in the facilitation of referrals between families and community resources.

The Social Worker position is classified as a "Mandated Reporter"; therefore, all appropriate procedures under the law will be followed to ensure student safety.

STUDENT ASSISTANCE PROGRAM (SAP)

In response to the Secretary of Education's plan to the General Assembly, the Department of Education, in collaboration with the Departments of Health and Public Welfare, designated the student assistance program as the vehicle to require and assist each school district to establish and maintain a program to provide appropriate counseling and support services for students who experience problems related to the use of drugs, alcohol and dangerous controlled substances. The Commonwealth's student assistance program is made up of a professionally-trained team and is designed to assist school personnel to identify issues, including alcohol, drugs and others, which pose a barrier to a student's learning and school success, with a systematic process using effective and accountable professional techniques to mobilize school resources to remove the barriers to learning, and, where the problem is beyond the scope of the school, to assist the parent and the student with information so they may access services within the community. Involvement of parents in all phases of the student assistance program underscores the parent's role and responsibility in the decision-making process affecting their children's education and is the key to the successful resolution of problems.

CAREER CENTER

Students in all grade levels are invited to visit the Career Center located in the Counseling Office. This is a resource center designed to assist students in their career decision making. Students will find a variety of reference materials such as:

- College and trade school directories
- Reference books on scholarships
- Study materials to prepare for the PSAT, SAT, ACT and Armed Services Vocational Aptitude Battery (ASVAB)
- Other information pertaining to post-secondary education, financial aid, career interest survey, etc.

Students who are interested in visiting the Career Center can do so during their study halls, lunch, or after school. Passes are available before school in the Counseling Office.

CAREER PLANNING DAYS

Students are encouraged to be proactive in exploring possible career paths. Job shadows, college visits, informational interviews of people in the field you hope to pursue and any other meaningful career exploration activities are encouraged. Career planning days can be used for students in grades 9-12. Procedures for career planning days must be followed to have the day counted as an excused absence. Students must provide a note from a parent/guardian to the counseling office prior to the career planning day. Upon return to school, the student must complete and submit a reflection on the career planning activity. Students have three (3) school days to submit the required information for the day to be excused.

COLLEGE & CAREER DAYS

Each October, when 9-11th graders take the PSAT test, seniors are encouraged and expected to be involved in a career exploration activity. Job shadows, college visits, ASVAB tests, or any activity related to a career exploration will be approved. Additional information will be put out annually to students and families regarding this specific career planning day.

CAREER EDUCATION AND WORK STANDARDS

All Thomas Jefferson High School students will be expected to complete a career portfolio in keeping with Title 22 Chapter 339.

To help ensure that all students in Pennsylvania are on track for meaningful postsecondary engagement and success, the Department has included a measure of students' career exploration, preparation, and readiness as part of Pennsylvania's state and federal accountability system through the Future Ready PA Index and under the Every Student Succeeds Act (ESSA). The Career Readiness Indicator recognizes efforts to ensure that all students have access to career exploration and preparation activities that are standards-aligned and evidence-based, including the development of career plans and portfolios that help students identify pathways and opportunities for postsecondary success. The Career Readiness Indicator identifies the percentage of students in a reporting cohort who demonstrate meaningful engagement in career exploration and preparation and implementation of individualized career plans through separate, specific measures based on grade level benchmarks aligned to the CEW standards. The benchmarks are as follows: 1. The percentage of students who, by the end of grade 5, demonstrate engagement in career exploration and preparation aligned to the CEW standards, via PA CareerZone or a locally designed career exploration and preparation program/curriculum. 2. The percentage of students who, by the end of grade 8, create an individualized career plan and participate in career preparation activities aligned to the CEW standards. 3. The percentage of students who, by the end of grade 11, implement their individualized career plan through ongoing development of a career portfolio and participation in career preparation activities aligned to the CEW standards. As a part of state and federal accountability, the indicator also aims to promote access and inclusion for career readiness activities for historically underserved students, including English language learners, students with disabilities, economically disadvantaged students, students of color, and students in nontraditional fields.

By the end of grade 11, the student has a career portfolio containing both the K-5 and 6- 8 grade band evidence, and an additional eight pieces of evidence, or at least two pieces of evidence each year, collected in the 9-11 grade band that validates all four strands of the CEW standards have been meaningfully addressed. At least two of these pieces of evidence for the 9-11 grade band must demonstrate implementation of the student's individualized career plan.

Students at Thomas Jefferson High School will use Xello to store career artifacts. Students will have the opportunity to add artifacts to their portfolio in every class they take at Thomas Jefferson High School as well as in grade level specific assignments every year.

THE ACADEMIC STANDARDS

Career Awareness and Preparation

13.1

- A. Abilities and Aptitudes
- B. Personal Interests
- C. Non-Traditional Workplace Roles
- D. Local Career Preparation Opportunities
- E. Career Selection Influences
- F. Preparation for Careers
- G. Career Plan Components
- H. Relationship between Education and Career

Career Retention and Advancement

13.3

- A. Work Habits
- B. Cooperation and Teamwork
- C. Group Interaction
- D. Budgeting
- E. Time Management
- F. Workplace Changes
- G. Lifelong Learning

Career Acquisition (Getting a Job)

13.2

- A. Interviewing Skills
- B. Resources
- C. Career Acquisition Documents
- D. Career Planning Portfolios
- E. Career Acquisition Process

Entrepreneurship

13.4

- A. Risks and Rewards
- B. Character Traits
- C. Business Plan

RECOMMENDED TIMETABLE FOR COLLEGE ADMISSION TESTING

Freshman/Sophomore Year (October) Junior Year (October) Junior Year Spring Senior Year Fall Junior Year Spring Senior Year Fall	PSAT 8/9 and PSAT	<ul style="list-style-type: none"> • Preliminary SAT prepares students for the SAT • Assesses critical reading, writing, and math problem-solving skills • Highly recommended for sophomores
	PSAT/NMSQT National Merit Scholarship Qualifying Test	<ul style="list-style-type: none"> • Preliminary SAT prepares students for the SAT • Assesses critical reading, writing, and math problem-solving skills • Used to determine eligibility for the National Merit Scholarship Award
	SAT	<ul style="list-style-type: none"> • Assesses critical reading, writing, and math problem-solving skills • Practice questions/tests available at www.collegeboard.org
	ACT	<ul style="list-style-type: none"> • Assesses skill levels in areas of math, English, reading, and science. • Writing is optional but not offered on the February tests. • Can be taken more than once to increase scores • Practice available at www.actstudent.org

GRADUATION REQUIREMENTS

The following requirements apply to all students. Credits are totaled for grades 10 to 12:

Language Arts (English)	Credits	4
Social Studies (SS)	Credits	3SS/4SC
Science (SC)	Credits	3SC/4SS
Mathematics	Credits	3
Computers	Credits	0.5
Physical Education/Health	Credits	1.5
Arts and/or Humanities	Credits	1
Electives	Credits	8
TOTAL CREDITS		25.00

The following requirements apply to all students in the class of 2028 and beyond. Credits are totaled for Grade 9:

Language Arts (English)	Credits	4
Social Studies (SS)	Credits	3SS/4SC
Science (SC)	Credits	3SC/4SS
Mathematics	Credits	3
Business/Tech Ed./Computers	Credits	0.5
Physical Education/Health	Credits	1.5
Arts and/or Humanities	Credits	1
Financial Literacy	Credits	0.5
Electives	Credits	7.5
TOTAL CREDITS		25.00

In order to commence with your class and receive your diploma, you must learn all course-credits needed to fulfill your graduation requirements by the end of your senior year. Course-credit failures earned in grades 9, 10 and 11 must be made up during or prior to the summer between your junior and senior years.

* All Students must complete three social studies and three science courses as well as one additional Science or Social Studies credit (or 0.5 credit of each) in order to fulfill the graduation requirement.

Every student must completely fulfill all graduation requirements established by the West Jefferson Hills School District and the State of Pennsylvania in order to participate in commencement activities at the end of the school year. Any student who fails to earn 25 credits required for graduation or does not complete one of the approved, State Pathways to Graduation will not be eligible to participate in the commencement ceremony without exception. The Pennsylvania Pathways to Graduation are displayed on the following page.

THOMAS JEFFERSON HIGH SCHOOL PATHWAYS TO GRADUATION

EVIDENCE-BASED PATHWAYS

(3 ARTIFACTS)
INDUSTRY-RECOGNIZED
CREDENTIALIZATION

SUCCESSFUL
COMPLETION OF
SERVICE-LEARNING
PROJECT
INTERNSHIP,
EXTERNSHIP,
COOPERATIVE,
OR EDUCATION
PROGRAM

LETTER
GUARANTEEING:
ACCEPTANCE
INTO A 2-YEAR
COLLEGE

FULL-TIME
EMPLOYMENT

MILITARY
ENLISTMENT

KEYSTONE COMPOSITE PATHWAY

EARN A
COMPOSITE
SCORE OF
4452 ON THE
KEYSTONES

AT LEAST ONE
SCORE OF
PROFICIENT

NO SCORE
OF
BELOW BASIC

KEYSTONE PROFICIENCY PATHWAY

SCORE PROFICIENT
ON ALL 3
KEYSTONE EXAMS:

ALGEBRA I
LITERATURE
BIOLOGY

ALTERNATIVE ASSESSMENT

SCORING A 3
OR HIGHER
AP EXAMS

GETTING
ACCEPTED
INTO 4-YEAR
COLLEGE

ASVAB (31)
PSAT (970)
SAT (1010)

CTE CONCENTRATOR

(1 Artifact)
INDUSTRY-
BASED
COMPETENCY
CERTIFICATION

LIKELIHOOD OF
INDUSTRY-
BASED
COMPETENCY
ASSESSMENT
SUCCESS

READINESS FOR
CONTINUED
ENGAGEMENT
IN CTE
CONCENTRATOR
PROGRAM
OF STUDY



STATE ASSESSMENTS

In addition to the courses/credits outlined here, all students at Thomas Jefferson High School will also need to demonstrate proficiency on State Assessments as defined by the Pennsylvania Academic Standards included in Chapter 4 of the Pennsylvania School Code; unless these requirements have been waived by the PA Department of Education or state legislature.

KEYSTONE EXAMS

The Keystone Exams are state mandated, end-of-course assessments designed to assess proficiency in the subject areas of Algebra, Literature, and Biology. Students in all Algebra, Biology and English 10 courses will demonstrate their proficiency on the Keystone Exam as an end of year assessment in May. Students who do not score proficient or advanced will re-test 3 times during future test administrations in Winter, Spring, and/or Summer. Demonstrating proficiency on the Keystone Exams is a requirement for graduation from Thomas Jefferson High School. Scoring proficient or advanced will satisfy the local requirement. The alternative options are listed under "Procedures for Seniors Who Do Not Pass a Keystone Exam."

KEYSTONE CREDIT

Thomas Jefferson High School recognizes the importance of academic achievement and the value of standardized assessments in evaluating student progress. In line with this commitment, we will award 1 full credit toward graduation to any student in the class of 2025 and beyond who earns proficient or advanced scores on all 3 Keystone Exams (Algebra, Biology, and Literature). If a student were to score proficient or advanced on 2 of 3 Keystone Exams, the student would earn a 0.5 credit toward graduation. The aim of this policy is to award student performance on the Pennsylvania Keystone Exams.

PROCEDURES FOR STUDENTS WHO DO NOT PASS A KEYSTONE EXAM AFTER THREE ATTEMPTS

If a student does not reach at least the "Proficient" level on a Keystone Exam after three attempts, or by the end of the junior year, the student must demonstrate proficiency through a local assessment aligned to the academic standards during their Senior Year. The students can either pass the local assessment with a 70% or higher, or they can complete the remedial class with a final grade of 70% or higher. The local assessment will be facilitated by Thomas Jefferson High School staff members and communicated to the appropriate students.

A student is permitted to take the retest up until the conclusion of his/her Junior year. Students with Individualized Education Programs (IEPs) can participate in the retest option and participate in other supplemental instruction, as determined by the IEP Team.

PROCEDURES FOR STUDENTS WHO DO NOT PASS A KEYSTONE EXAM

If a student does not receive a score of "Advanced" or "Proficient" on a Keystone Exam, the student is permitted to take a re-test during designated testing windows established by the Pennsylvania Department of Education. Students may take the retest as many times as desired prior to the conclusion of their junior year.

If a student does not reach at least the "Proficient" level on a Keystone re-test in a particular subject, he or she must demonstrate proficiency through another method in order to meet the graduation requirements.

If a student's Performance Level is "Basic" on his or her first administration of the Algebra, Literature, or Biology Keystone Exam(s), the student will be provided one of the following forms of remediation: Students who score in the top half of the basic range, as noted by the scaled score, will be provided an Individualized Learning Plan (ILP) that the student will work on independently. The ILP will be developed in conjunction with a content area teacher and will be based on the specific assessment anchors where the student needs additional support. The student may also elect to enroll in the appropriate remedial course.

If the student's Performance Level is "Below Basic" on his/her first administration of the Algebra, Biology, and/or Literature Keystone Exam(s), the student is required to enroll in the semester remedial course during the school day the following school year(s) for supplemental instruction prior to the conclusions of Junior year. Students with Individualized Education Programs (IEPs) can participate in the retest option and participate in other supplemental instruction, as determined by the IEP Team.

PROCEDURES FOR SENIORS WHO DO NOT PASS A KEYSTONE EXAM

Seniors who have basic or below basic scores on the Keystone Exam have alternative ways to graduate under Pennsylvania Senate Bill 1095. In conjunction with a 70% or higher in a keystone remedial course and/or passing the local assessment with a 70% or higher, Seniors will need to successfully complete one of the alternatives:

- Proficiency on the SAT, PSAT, or ACT (PSAT 970 or SAT 1010)
- Composite score pathway: 4452 or more combined on all 3 Keystone Exams
- Earning a score of 3+ on an AP Exam
- Completion of a dual enrollment program
- Completion of a pre-apprenticeship program
- Acceptance to an accredited four-year nonprofit institution of higher education
- Completion of a Service Learning Project
- A letter of full time employment
- An acceptable score on a Work Keys Assessment

ALTERNATIVE OPTIONS FOR EARNING CREDIT

Alternative options for earning credit must relate directly to the achievement of Academic Standards. These options include:

1. Advanced Placement Exams - The Advanced Placement (AP) program, sponsored by the College Board, provides students at Thomas Jefferson High School with the opportunity to take college-level courses during high school. TJHS proudly offers 21 AP courses, giving students a rigorous academic experience. At the end of each course, students have the option to take a comprehensive AP exam administered over a two-week period in May. Success on these exams may earn students college credit, depending on the score and the policies of the college or university they attend. AP exams are scored on a five-point scale: 5 (extremely well-qualified), 4 (well-qualified), 3 (qualified), 2 (possibly qualified), and 1 (no recommendation). Students are strongly encouraged to take the AP exam at the conclusion of their course. Registration and associated fees are required to participate. The exams typically include a combination of multiple-choice questions and free-response sections, which may involve essay writing, problem solving, and other advanced skills, reflecting the college-level rigor of the program.
2. Dual Enrollment and Online Course Opportunities at Thomas Jefferson High School - Thomas Jefferson High School offers students the opportunity to enroll in courses outside of the high school through dual enrollment or online options. These opportunities are available to students who have advanced beyond the coursework offered at TJHS or who are interested in subjects not currently available within the school's curriculum. By enrolling in college classes, students can earn credits that count toward graduation.

To pursue these options, students must obtain prior authorization to transfer credits before enrolling in any college or online courses. All costs associated with these courses, including tuition, transportation, materials, and supplies, are the responsibility of the student and their family. The following procedures must be followed to gain approval for dual enrollment or online credit:

APPLYING FOR CREDITS TAKEN OUTSIDE THE DISTRICT

- **Complete the Enrollment Application for Courses Offered Outside of TJHS:**
A separate form must be completed for each course being considered. The application must be filled out in its entirety for approval to be considered. Please note that approval is not guaranteed.
- **List Only One Course Per Form:**
When completing the application, ensure that each form contains only one requested course.
- **Submit the Application to Your School Counselor:**
All applications must be submitted to your assigned school counselor for review and consideration.
- **Accredited Institutions Only:**
Courses must be taken through accredited educational institutions. Evidence of accreditation is required.
The curriculum and expectations of the course must align with those of Thomas Jefferson High School.
- **Submit Official Transcripts:**
Upon successful completion of the course, official transcripts from the source institution must be submitted to the student's school counselor no later than the close of TJHS's grading period.
Failure to meet this deadline will result in disqualification of the course for graduation credit and exclusion from the student's official high school transcript.
- **Address Grading Issues Promptly:**
If any grading issues arise, it is the student's responsibility to meet with their school counselor immediately upon discovering the issue.

By following these procedures, students can ensure that credits earned outside of TJHS will be appropriately evaluated and applied toward graduation requirements. These options allow students to expand their educational horizons while maintaining a clear pathway toward graduation at Thomas Jefferson High School.

3. **CCBC High School Academies** - In partnership with the Community College of Beaver County, students in grades 11 and 12 have the opportunity to earn up to 28 college credits in conjunction with earning a high school diploma. CCBC offers a set curriculum in person or virtually. All costs associated with college classes or online courses including but not limited to tuition, transportation, related materials and supplies are the responsibility of the student and family. Contact the counseling office for more information.
- **Aviation Academy:** The CCBC Aviation Academy program provides exploration into Professional Pilot, Air Traffic Control, and Unmanned Aerial Vehicles career paths.
 - **Criminal Justice Academy:** The CCBC Criminal Justice Academy provides hands-on experience in classrooms, mock crime scenes, and other real-world environments to prepare students for careers in law enforcement.
 - **Education Academy:** The CCBC Education Academy provides students with skills to prepare developmentally appropriate lessons for a future career in teaching. Students choose between Pre-K-4th Grade Education or Secondary Education.
 - **Health Academy:** The CCBC Health Academy provides students opportunities to explore careers in nursing, practical nursing, radiologic technology, physical therapy, respiratory therapy, nurse practitioner, physician assistant, nurse anesthetist and more.
 - **STEM Academy:** Whether you are passionate about designing the future, mastering complex coding, or protecting critical systems from cyber threats, our academy provides hands-on experience in state-of-the-art classrooms and labs. Attend classes in person at a designated location or participate online, live each day, from either school or home.

For additional information regarding the CCBC High School Academies, please visit www.ccbc.edu/high-school-academies. Any student who schedules these courses must also complete the necessary enrollment paperwork for CCBC. **Please note that tuition, books, and any additional expenses related to the academies are the sole responsibility of the student and their family. The West Jefferson Hills School District is not responsible for any costs associated with the CCBC High School Academies.**

4. Career and Technology Education Opportunities at Steel Center - Thomas Jefferson High School students have the opportunity to earn credits through the Steel Center Career and Technology Center (SCCTC). Steel Center provides hands-on educational experience in various trade and service careers, allowing students to explore career paths while gaining valuable skills.

Students in grades 10-12 who enroll at Steel Center complete their core curriculum at TJHS while fulfilling their elective requirements at SCCTC. All credits earned through Steel Center are funded by the West Jefferson Hills School District, making this a cost-free opportunity for students to expand their education and prepare for future career opportunities. Detailed course descriptions for Steel Center programs can be found in the final section of this guide.

5. College in High School (CHS) Program - The College in High School (CHS) Program at Thomas Jefferson High School offers students the opportunity to earn college credits while still in high school. Through partnerships with local universities, including the University of Pittsburgh, Carlow University, Seton Hill University, Duquesne University, and Waynesburg University, TJHS teachers provide college-level courses that align with university standards.

Students enrolled in CHS courses can earn college credits and receive a grade on an official university transcript for successfully completed coursework. These credits are often transferable to other universities, giving students a head start on their post-secondary education.

CHS courses are weighted on the same credit scale as Advanced Placement (AP) courses, reflecting their rigorous academic expectations. Students who wish to receive college credit are responsible for the associated tuition and fees.

By participating in the CHS Program, TJHS students gain a unique opportunity to challenge themselves academically, reduce future college costs, and prepare for the demands of higher education.

6. Work Study Program - The Work Study Program at Thomas Jefferson High School offers seniors in good academic standing the opportunity to participate in a two-credit, non-weighted program that allows them to gain valuable work experience during the school day. To be accepted into the program, students must meet specific eligibility requirements and complete the application process.

Eligibility and Application Requirements:

- Students must have a verifiable job at the time of application.
- A letter from the employer on company letterhead is required, stating the agreed-upon work schedule during the school day.
- A completed Work Release Application must be submitted, signed by a parent/guardian who assumes responsibility for the student after leaving school.
- The student's school counselor must verify that the student has sufficient credits to graduate.

Program Requirements:

- Students must work a minimum of 15 hours during their release time, Monday through Friday.
- Students must sign out at the attendance desk and exit through the front door.
- The School Counseling Office must be immediately notified if the student's employment is terminated or their workplace changes.

Prohibited Activities:

- Students may not be self-employed, work for parents/relatives, or engage in "under the table" employment or other jobs not covered by the employer's liability and workers' compensation insurance.
- Students may not work on days when they are absent or suspended from school.

Additional Information:

- Transportation to and from the place of employment is the sole responsibility of the student.
- Students must carry at least 6.0 credits during the school year unless they have prior approval from the high school administration.
- Work release schedules typically allow students to leave after Period 5, but a late start option is also available, enabling students to begin their school day at the start of Period 4 or 5 if it aligns better with their schedule and necessary requirements for graduation.

Revocation of Work Release Privileges:

Work release privileges may be revoked if a student demonstrates poor attendance, declining academic performance, behavioral issues, or failure to comply with monthly requirements and paperwork. This program is designed to provide students with real-world work experience while maintaining their commitment to academic success at Thomas Jefferson High School.

7. Mentorships/Internships Program - Thomas Jefferson High School provides seniors with the opportunity to gain valuable hands-on experience through mentorships or internships. These experiences allow students to explore career interests, develop professional skills, and prepare for postsecondary opportunities.

To participate in a mentorship/internship program, students must meet the following criteria:

- Be on pace to graduate on time and meet one of the state-mandated graduation pathways.
- Receive a teacher recommendation.
- Be in good standing with attendance, grades, and discipline.
- Have a verifiable mentorship/internship opportunity at the time of application.
- Be able to provide their own transportation to and from the mentorship/internship location.

Application Process:

Students must complete and submit the following documentation:

- A letter from the employer or mentor on official company letterhead stating the agreed-upon schedule during the school day.
- A completed Mentorship/Internship Release Application signed by a parent/guardian who assumes responsibility for the student after leaving school.
- Verification from the student's school counselor confirming they have sufficient credits to graduate.

Program Details:

- Students are eligible to receive up to two unweighted credits for their mentorship/internship experience.
- Mentorships/internships must occur during the school day.
- Students can typically leave school after Period 5 to participate, though a late start option is available, allowing students to begin their school day at the start of Period 4 or 5 if it better aligns with their mentorship/internship schedule.

Additional Information:

This program offers a unique opportunity for students to apply classroom knowledge in real-world settings, enhancing their educational experience and preparing them for future success.

8. Credit Recovery Program - Thomas Jefferson High School offers students the opportunity to enroll in credit recovery courses to make up for failed semester or full-year classes. This program helps students stay on track to meet graduation requirements and maintain academic progress.

Eligibility and Enrollment:

- Credit recovery is available to students who fail a semester or full-year course during the school year.
- Students are encouraged to enroll in a credit recovery program at their own expense.
- Information about course availability and approved locations for credit recovery is available in the School Counseling Office and on the counseling website.

Credit Recovery Options:

- TJHS Summer Academy: Starting in Summer 2025, students may enroll in courses through the Thomas Jefferson High School Summer Academy.
- Other Options: Students may also take credit recovery courses at an area high school, through an accredited online program, or at a college or university. A three (3) credit college course is equivalent to one high school credit.

Transcript and GPA Impact:

- Both the grade earned during the school year and the credit recovery grade will appear on the student's transcript.
- Both grades will be calculated into the student's Grade Point Average (GPA).

This program provides students with a second chance to earn required credits and continue their academic journey toward graduation. For additional details, students should contact their school counselor.

ASSESSMENT OF STUDENT PROGRESS

The Board recognizes that a system of assessing student achievement can help students, teachers, and parents/guardians to understand and evaluate a student's progress toward educational goals and academic standards.

Assessment shall be the system of measuring and recording student progress and achievement that enables the student, parents/guardians and teachers to determine a student's attainment of established local and state academic standards; learn the student's strengths and weaknesses; determine where remedial work is required; and plan an educational or vocational future for the student in areas of the greatest potential for success.

- The Board directs that the district's instructional program shall include a system of assessing all students' academic progress. The system shall include descriptions of how achievement of academic standards will be measured and how this information will be used to assist students having difficulty meeting required standards.
- Students with disabilities shall be included in the district's assessment system, with appropriate accommodations when necessary.
- The Superintendent or designee shall develop and implement an assessment system to measure student progress, in accordance with district goals and state regulations.

GRADING PRACTICES IN THE CLASSROOM

- There is a variety of evaluating practices employed by the faculty of West Jefferson Hills School District. Students are evaluated in terms of their performance on various types of tests, quizzes, papers, reports, projects, etc.
- The selection of the instrument for evaluation depends upon the nature of the course, the material, and the student.
- The method for describing performance depends upon evaluation techniques and the nature of the instrument.
- The West Jefferson Hills School District will continue to notify parents in a timely fashion when performance is unsatisfactory in any grading period. Current procedures for the notification process are outlined in the Teacher's Handbook.

GRADING SYSTEM AND WEIGHTED SCALE

The marking system at Thomas Jefferson High School represents five levels of achievement. These levels indicate a student's achievement as compared with that of others studying the same subject matter.

QUALITY POINTS

See course description for unit of credit

COURSE CREDIT	GRADES	POINTS
1	A - Superior attainment (90.00% - 100.00%)	4
1	B - Above average (80.00% - 89.99%)	3
1	C - Average (70.00% - 79.99%)	2
1	D - Below average (60.00% - 69.99%)	1
1	F - Failing (00.00% - 59.99%)	0

COURSE CREDIT	GRADES	POINTS
.5	A - Superior attainment (90.00% - 100.00%)	2
.5	B - Above average (80.00% - 89.99%)	1.5
.5	C - Average (70.00% - 79.99%)	1
.5	D - Below average (60.00% - 69.99%)	.5
.5	F - Failing (00.00% - 59.99%)	0

COURSE CREDIT	GRADES	POINTS
1.5	A - Superior attainment (90.00% - 100.00%)	6.0
1.5	B - Above average (80.00% - 89.99%)	4.5
1.5	C - Average (70.00% - 79.99%)	3.0
1.5	D - Below average (60.00% - 69.99%)	1.5
1.5	F - Failing (00.00% - 59.99%)	0

ADVANCED PLACEMENT COURSES

Advanced Placement (AP) Courses are first year college level courses that follow the respective College Entrance Examination Board (CEEB) curriculum and prepare students for the AP test in the particular subject area. On the basis of AP test results, students may earn college credit at colleges and universities that participate in this program. Thomas Jefferson High School strongly recommends all students who sign up for AP courses to take the AP Exams in May. The WJHSD district will reimburse 100% of AP Exam costs for every student that receives a score of 3, 4, or 5 for each test completed. The initial cost of the exam(s) will be the responsibility of the student. Assistance is available to students that have financial need as requested through the counseling office.

AP QUALIFYING SCORE REIMBURSEMENT

Thomas Jefferson High School partnered with the National Math and Science Initiative (NMSI) in order to advance STEM education and increase enrollment and success in TJ's Advanced Placement program. NMSI's mission is to ensure that all students, "especially those furthest from opportunity, thrive and reach their highest potential as problem solvers and lifelong learners who pursue their passions and tackle the world's toughest challenges" (nms.org).

Students seeking academic challenge and the opportunity to experience college-level work while in high school should review the list of available Advanced Placement (AP) courses in this Program of Studies. All students enrolled in the Advanced Placement program will be encouraged to take the AP examination associated with each course to mark their culmination of learning. The West Jefferson Hills School District continues to offer the AP Exam Fee Reimbursement Incentive to all AP students who earn a three or higher on their respective AP exams, enabling students to potentially earn college credits for free. To learn more about AP courses and examinations, visit apcentral.collegeboard.org. To read more about the opportunities available through NMSI, visit nms.org.

AP English: Language and Composition	AP European History	AP Computer Science Principles
AP English: Literature and Composition	AP Computer Science A	AP Environmental Science
AP Psychology	AP Computer Science BC	AP US History
AP US Government & Politics	AP Physics 1 & 2 Combined	AP Drawing Portfolio
AP Biology	AP Calculus AB	AP World History
AP Chemistry	AP Physics C	AP Spanish
AP French	AP Statistics	AP Physics 1
AP Precalculus		

COLLEGE IN HIGH SCHOOL (CHS)

The College in High School (CHS Program) enables our teachers to work with local universities in a partnership to offer college level courses. CHS courses provide high school students the opportunity to earn college credits and receive a grade on a university transcript for courses successfully completed at Thomas Jefferson High School. In many cases, students may transfer these credits to other universities. These courses are on the same weighted credit scale as Advanced Placement courses. Students wishing to receive college credit must assume the cost of tuition and fees for college credit.

CHS Intro to Public Relations	CHS Journalism	CHS Public Speaking
CHS Business Calculus	CHS Calculus AB	CHS Calculus BC
CHS Statistics	CHS Psychology	CHS European History
CHS Shaping the Modern World	CHS Incubatoredu	CHS French III
CHS French IV	CHS Spanish III	CHS Spanish IV
CHS Anatomy and Physiology	CHS Integrated Marketing Communications	

WEIGHTED SCALE

As long as courses differ substantially in academic challenge, a weighted scale for computing grade-point average will remain at Thomas Jefferson High School.

QUALITY POINT SYSTEM

GRADE	REGULAR	HONORS	AP & COLLEGE IN HIGH SCHOOL
A	4	4.50	5
B	3	3.50	4
C	2	2.50	3
D	1	1	1
F	0	0.00	0

All Advanced Placement/College in High School and Honors courses will be reviewed annually by the West Jefferson Hills School District Board of Directors and approved as per the Thomas Jefferson High School Academic Handbook. GPA/QPA will not be given over the phone.

QPA CALCULATION EXAMPLE

COURSE	FINAL LETTER GRADE	QUALITY POINTS		COURSE CREDIT VALUE		QUALITY POINT TOTAL
Algebra I	A	4.0	x	1.0	=	4.0
Biology	B	3.0	x	1.0	=	3.0
Honors Civics & Government	B	3.5	x	1.0	=	3.5
AP Psychology	B	4.0	x	1.0	=	4.0
Physical Education	A	4.0	x	0.5	=	2.0
				4.5		16.5

Quality Point Average = $16.5/4.5 = 3.67$

REPORTING OF STUDENT PROGRESS

The Board believes that cooperation between school and home is a vital ingredient in the growth and education of each student. The Board acknowledges the school's responsibility to keep parents/guardians informed of student welfare and academic progress and also recognizes the effects of federal and state laws and regulations governing student records.

The Board directs the establishment of a system of reporting student progress that requires all appropriate staff members, as part of their professional responsibility, to comply with a reporting system that includes academic progress reports, report cards, telephone calls, and parent/guardian conferences with teachers.

The Superintendent or designee shall develop procedures for reporting student progress to parents/guardians.

Various methods of reporting, appropriate to grade level and curriculum content, shall be utilized.

Both student and parent/guardian shall receive ample warning of a pending grade of failure, or one that would adversely affect the student's academic status.

Scheduling of parent-teacher conferences shall occur at such times and in such places that will ensure the greatest degree of participation by parents/guardians.

Report cards shall be issued at intervals of not less than nine (9) weeks.

Review and evaluation of methods of reporting student progress to parents/guardians shall be conducted on a periodic basis.

PERCENTAGE GRADING SYSTEM

The marking system uniformly used at Thomas Jefferson High School represents five levels of achievement. These levels are:

- A – Superior attainment of course objectives (89.5%-100%)
- B – Above-average attainment of course objectives (79.5-89.49%)
- C – Average attainment of course objectives (69.5-79.49%)
- D – Below-average attainment of course objectives (59.5-69.49%)
- F – Performance does not meet minimum standards
- AD- Administrative D Teacher has awarded a student passing grade based on effort (60%)
- W- Student withdrawn from class without earning credit
- WF- Student withdrawn from course and will receive the equivalent of a failing grade
- M- Medical student will receive graduation credit for course but no numeric calculation toward QPA or GPA

CALCULATION OF FINAL GRADES

Reporting of nine-week and semester exam grades will be done by averaging the percentage grade for each marking period. The average percentage will then become a final letter grade for the course. It is important to note that only the final grade will be recorded on the transcript.

Semester Course Grade Calculation Example: Q1: 93% Q2: 82% Semester Average = $(93+82)/2 = 87.5\% = 88\% = B$

Year-long Course Final Grade Calculation Example:

Q1: 82% Q2: 71% Q3: 87% Q4: 93% Year Average = $(82+71+87+93)/4 = 83.25\% = 83\% = B$

INCOMPLETE RULE

Major Course Requirement with an incomplete grade ("I") will be entered as the grade for any marking period when a student does not complete a major course requirement. The incomplete will remain as the grade of record until the student completes the major course requirement prior to the end of the course. If the major course requirement is not completed, the incomplete grade will remain on the report card, and the final course grade will be an "F" regardless of quality point average.

Major course requirements subject to this rule include term/research papers; notebooks required for a course; required projects in industrial technology, arts/crafts, home economics, etc. Chapter tests, homework assignments, quizzes, etc., are not considered major course requirements.

Prior approval by the principal is required to implement this rule. Once approval is given, strict procedures for notifying students and parents in advance must be followed.

An extension of time will be made to allow for students who fail to meet major course requirements due to a health problem, death in the family, or some unforeseen problem. Each situation will be evaluated on a case-by-case basis by the building principal.

APPEAL PROCESS

Should any parent or guardian have a question regarding a reported grade, it is recommended that a parent contact the school to arrange a conference with the teacher either in person or via phone to receive verification through classroom records. If further inquiries concerning the grade in question are desired, conferences with building administrators/school counselors and teachers may be arranged.

ADMINISTRATIVE D

An administrative D can be awarded to a student at the end of a course who has worked hard during the entire course, has done all that the teacher asked, but still obtained a failing average. With administrative approval, a teacher may place an Administrative D as a final average that will be calculated at a 60%. This grade shall be listed on the final transcript as an Administrative D (AD).

HONOR ROLL

An Honor Roll will be compiled at the end of each nine-week period. Honor Roll status is based upon a student's earned quality point average as follows:

Students with an "F", "D" or "I" (incomplete) are not eligible for honor roll status.

GPA	HONOR ROLL LEVEL
4.0	Highest Honors
3.600 - 3.999	High Honors
3.200 - 3.599	Honors

GRADUATION RECOGNITION LEVELS

Upon completion of final senior year grades, a student's final cumulative GPA will be calculated for all four years of high school. Students meeting criteria will be awarded cords and or medallions to wear at graduation to signify their academic accomplishments. The final, cumulative GPA requirement for cords and medallions is listed below.

GPA	HONOR ROLL LEVEL
4.0	Honor Stole
3.600 - 3.999	Gold Cord
3.200 - 3.599	Silver Cord

NATIONAL HONOR SOCIETY

To be eligible for selection into the TJHS Local Chapter of the (NHS) National Honor Society, you must have a cumulative GPA of 3.800 or higher. Cumulative GPA will be assessed after the completion of your sophomore year. The induction ceremony takes place in the fall of the student's junior year. Eligible students will be notified in writing with more details in September by the NHS Adviser. Complete details regarding NHS membership can be found in the Thomas Jefferson High School Chapter of the National Honor Society Chapter Bylaws.

AP SCHOLAR

Students who have taken at least 5 AP examinations and who have scored at least a 3 or greater on 3 or more exams will be recognized as an AP Scholar. AP Scholars will be recognized in the graduation program and a designation will be placed on the individual's diploma with a medal or cord to wear at graduation.

COURSES

ENGLISH LANGUAGE ARTS

English 9*	English 10*	English 11*	English 12*
Honors English 9*	Honors English 10*	AP English: Language and Composition*	AP English: Literature and Composition*
Honors 12th Grade Literature	Honors 12th Grade Composition		
English Language Arts Electives			
CHS Public Speaking	CHS Intro to Public Relations	Intro to Film Criticism	CHS Journalism
Print Journalism-Yearbook*	Theater Orientation	Theater Production: From Page to Stage	CHS Digital Media Communications
Comic Books and Graphic Novels	Reading in the Dark: Film as Literature		

MATHEMATICS

Algebra I*	Pre-Calculus/Trigonometry*	AP CHS Calculus AB*
Algebra II*	Honors Algebra II*	Geometry*
Honors Geometry*	Pre-Algebra	Probability and Statistics*
Algebra III/ Trigonometry*	AP CHS Statistics*	Algebra II B
AP CHS Calculus BC*	Calculus*	CHS Business Calculus
AP Pre Calculus		

SCIENCE

Biology*	Physical Science*	Physics*	CHS Anatomy and Physiology*
Honors Biology*	Chemistry*	AP Physics 1*	Introduction to Astronomy*
AP Biology*	Honors Chemistry*	AP Physics 1 & 2 *	Environmental Science*
AP Chemistry*	AP Physics C*	AP Environmental Science*	Principles of Biology

SOCIAL STUDIES

Civics and Government*	Honors Civics and Government*	Psychology*
U.S. History*	World History*	Sociology*
AP U.S. History*	AP World History*	Law I*
AP European History*	CHS Shaping the Modern World*	Law II*
AP/CHS Psychology*	Global Leadership Certificate	Economics*
AP US Government & Politics*		

BUSINESS AND INFORMATION TECHNOLOGY

Accounting I	C/C++Programming for Engineering & Artificial Intelligence*	Python-Introduction to Programming	Marketing
Accounting II	CHS Incubatoredu-Entrepreneurship	Exploratory Business	AP Computer Science*
Accounting III	Retail Management	Cyber Forensics	Financial Literacy
Honors Financial Literacy	CHS Personal Finance	Freshman Focus	Business Operations I

TECHNOLOGY EDUCATION

Tech Lab	Engineering	Architecture
Robotics/Drones	Introduction to TJTV	Advanced TJTV
Construction Technology	Theater Construction and Technology	Commercial Design Tech Ed.

TECHNOLOGY EDUCATION

French I, French II, French III and CHS French III*	Spanish I, Spanish II, Spanish III and CHS Spanish III*
CHS French IV	CHS Spanish IV
AP French*	AP Spanish*
Hispanic Culture and Spanish Conversation	

FAMILY AND CONSUMER SCIENCE

Introduction to Family and Consumer Science	Foods and Nutrition	Child Development Theory
Fabric, Fashion and Design I	Interior Design	Nursery School
Advanced Fabric, Fashion and Design II	Advanced Fabric, Fashion and Design III	Adult Living

FINE ARTS (ARTS & CRAFTS)

Art I	Ceramics Studio I	Crafts & Mixed Media Arts
Art II	Advanced Ceramics Wheel Building	Advanced Ceramics Hand Building
Photography/Video Production	AP Art: Drawing Portfolio	Creative Studio Media
Basic Graphic Design	Sculpture	Commercial Design Art

FINE ARTS (MUSIC)

Music Theory and History	Jazz Ensemble	Varsity Choir
Music Theory II	Strings Ensemble	Concert Choir
Marching/Concert Band	Percussion Ensemble	A Cappella Chorus
Honors Symphonic/ Marching Band	Show Choir	

PHYSICAL EDUCATION AND HEALTH

Physical Education 9	Sports Theory and Applications	Foundations of Health and Safety
Health PE/10	Partners in PE	Competitive Team Games 11/12
Individual Fitness Lifetime Activities 11/12	Lifeguarding	Advanced Weight Training

STEEL CENTER CAREER AND TECHNICAL EDUCATION

Advertising and Design	Automotive Mechanics	Baking/Pastry Chef	Building Trades & Maintenance
Carpentry	Collision Repair and Refinishing	Cosmetology	Culinary Arts
Cybersecurity and Networking Technology	Electrical Construction	Health Assistants	Heating, AC, and Refrigeration
Medical Professions	Public Safety	Sports Medicine & Rehabilitation Professions	Veterinary Assistant
Welding			

*Courses may be added or deleted at the discretion of Steel Center

SCHEDULE CHANGES

Students are expected to retain the program of studies/courses they have selected during the scheduling process and must maintain a full schedule of courses (7 Credits). Counselors and administration will make conscious efforts to schedule all seniors a full seven credit schedule.

All level change requests, including drops from AP to Academic or from Honors to Academic, must be made before the last day of the current school year. The master schedule is built based on student course requests; therefore, it is essential that all students finalize their core class selections before the school year ends. TJHS makes every effort to ensure that students are scheduled for the core courses they select during the scheduling process. Unless there are extenuating circumstances, the only course changes permitted at the start of the new school year will be for elective offerings.

There are two types of schedule changes:

- Dropping/Adding a course
- Dropping a course

SENIOR AMBASSADOR

The Senior Ambassador Program is a volunteer opportunity to assist the high school administrators by providing such things as tours of the building, transition assistance to new students, escorting guests, designing digital display presentations, and other activities throughout the building. The program will only be available to 12th-grade students who must meet the following criteria:

- 12th-grade student - in good standing (passed at least 21 credits)
- Selected 7 courses and 4 alternates as part of the scheduling process; and
- Must have an irresolvable schedule conflict
- Senior ambassador periods are not guaranteed to fit into all students schedules

DROPPING/ADDING A COURSE

The Drop/Add Period covers the first 5 days of a year-long course (August/September) and the first 5 10 days for second-semester courses). During this time students are able to change elective courses more freely than at other times of the year.

Students will have the ability to move from one elective to another elective as space permits. We want to ensure that students are in classes they want to be in. Students are not able to move from one section of a class to another section under this scenario (A student can't move from one English 10 teacher to another English 10 teacher). After the first 5 days of the school year or the first 5 10 days of the second semester, students will not be able to add a new class, as too much class material will have been covered during the interim. Level changes of core academic classes will only be made in extremely limited situations and must be approved by an administrator.

DROP/ADD COURSE PROCEDURE

Students may add or drop an elective class within the first week (5 days) of a course without a penalty at the beginning of the school year (August/September). Exceptions may be made with administration approval only for the following reasons: 1) medical reasons; 2) additional coursework that was completed over the summer; or 3) academic misplacement. Students must complete the "Drop/Add Form" which can be picked up in the Counseling Office. Parent signature is required. To drop a course for academic misplacement, a meeting with the parents, administration, counselor, and the classroom teacher must be held prior to the course drop and assignment of a new course.

Dropping a course after the first week(5 days) of school will result in a "Withdrawal " being permanently attached to the official transcript. A withdrawal will not be calculated into the students final GPA in any way. Students that are removed from a course for cheating, non compliance, parent/student decision, or any additional disciplinary reason will receive a "WF Withdrawal Failure". Withdrawal failures will be calculated as an F on the individual's final transcript.

DROPPING A COURSE

For a 1.0 credit class or greater (full year course) any class dropped prior to the end of the first five days of a new school year or the first five days of the second semester will not be recorded on a transcript. Classes dropped after the first five days of a new school year or the first five days of the second semester will result in at least a "W" on a transcript which will be part of a student's permanent record. Students may also be assigned a "WF" withdrawal failure if the teacher, administration, parents, or any combination of these three feel it appropriate. Withdrawal Failures will be included when calculating a cumulative QPA and will be the equivalent of an "F" for the year. A WF will be displayed on a student's final transcript.

For a .5 credit class or greater (half year course) any class dropped prior to the end of the first five days of a new school year or the first five days of the second semester will not be recorded on a transcript. Classes dropped after the first five days of a new school year or the first five days of the second semester will result in at least a "W" on a transcript which will be part of a student's permanent record. Students may also be assigned a "WF" withdrawal failure if the teacher, administration, parents, or any combination of these three feel it appropriate. Withdrawal Failures will be included when calculating a cumulative QPA and will be the equivalent of an "F" for the year. A WF will be displayed on a student's final transcript.

SCHEDULE CHANGE PROCEDURES/PROCESS

- All schedule changes must be initiated by a parent/guardian request in writing (note or email).
- A student's counselor and grade level principal will meet with the student to discuss the ramifications of making a change to the student's schedule.
- A schedule change form must be completed with the signatures from teachers, a parent/guardian, and the student's counselor.
- All changes are accommodated only as space permits in classrooms.

VALID REASONS FOR A SCHEDULE CHANGE INCLUDE:

- Scheduling error – If a student is incorrectly scheduled for a class, that error will be corrected upon request of a student/parent.
- Ensuring graduation requirements are being met
- Completion of a summer school remediation class
- Adding work-study, mentorship/internships, dual enrollment, or college and career electives

INVALID REASONS FOR A SCHEDULE CHANGE INCLUDE:

- Poor work ethic resulting in failing grades
- After school employment/extra-curricular activities
- Request for teacher change
- Preferred class periods (medical exceptions may apply)
- Having classes with friends
- Overriding the teacher recommendation process after a meeting was held with a signed agreement.
- Inappropriate academic placement resulting in a D or F

HOMEBOUND INSTRUCTION

Students who anticipate being absent from classes due to illness for a duration of ten school days or longer should have their parents contact their counselor. Homebound instruction is appropriate for extended absences and can only be considered by the school upon receipt of a physician's written recommendation. (9 weeks or less). Students who require to be out of school for a period of time longer than nine weeks will be recommended to the Thomas Jefferson High School Cyber Program.

PE MEDICAL

Students that are medically unable to participate in Physical Education Class (PE), with a signed note from their physician, shall receive a medical exemption for the course. A medical exception will be indicated on the student's final transcript as an "M" Medical. This will count toward the 25 cumulative credits a student needs to graduate from Thomas Jefferson High School. A "M" Medical will have no numeric value when it comes to calculating a student's QPA or their final GPA. Medical Exemptions are good for one school year. Students with chronic or life long conditions will need to renew their medical at the beginning of each new school year.

MAKING UP FAILED SUBJECTS

If a subject is failed, it can be made up in the following ways:

- Repeating the subject the following year
- Repeating the subject at an accredited summer school program (2 Credit Maximum Per Year)
- Repeating the subject through an administratively approved tutoring program

Students who plan to take courses during the summer in order to satisfy sequential course requirements, who plan to make up failed course or who plan to take courses for personal improvement (i.e., computer courses) must complete and submit a Summer Course Work Form to the counselor for approval before registering or beginning any courses that are to appear on the student's high school transcript. August 11 is the deadline for completion of such summer course work for all students unless otherwise approved by the principal. All courses taken over the summer will become part of the student's academic record and will be averaged into the existing student GPA. A successful summer school grade will not replace a failing grade that was earned during the school year.

Prior to moving to a next level course, the student is required to successfully pass the prerequisite course. For example, Algebra I must be passed prior to moving to Algebra II.

SUMMER COURSE WORK FORMS ARE AVAILABLE IN THE COUNSELING OFFICE. STUDENTS MUST HAVE NECESSARY PAPERWORK FROM THEIR COUNSELOR PRIOR TO STARTING SUMMER SCHOOL.

OVERRIDING TEACHER RECOMMENDATION

Every spring once teacher recommendations are submitted and students complete course requests for the upcoming school year, TJHS will begin the Course Override Process. Students are recommended for courses based upon established criteria in the previous level course and teacher review of course selections. Before course placement change is considered, parents must make a written request to override a recommended course. A meeting will be scheduled with the counselor, administration, and the parent to look at data and discuss the new course. All course overrides that are granted are final and cannot be reversed once the written agreement is signed between the student, parent(s), and the district. The exception to this rule is regarding math placements. Students wishing to override a teacher recommendation for math placement must take placement tests for the course and score a minimum of a 70% on the exam. Students will have two opportunities to complete the placement exams for math overrides. One will be offered before the end of the year. The second opportunity will be held during the summer. Without a satisfactory score(s) the override will not be granted. **NO OVERRIDE REQUESTS WILL BE ACCEPTED FOR ANY COURSE ONCE THE CURRENT SCHOOL YEAR ENDS.**



OVERRIDE REQUEST FORM

SUBJECT LOAD

All students are required to carry a minimum of 7 credits annually during the Freshman, Sophomore, and Junior years. Steel Center students must be enrolled in 4 credits during their Sophomore and Junior years at Thomas Jefferson High School. In conferences each year, every effort is made to give individual attention to course selection, sequential pattern of courses, and to meeting all requirements of both the State of Pennsylvania and Thomas Jefferson High School for graduation. College-bound students should carry at least four (4), and preferably five (5), strong academic subjects each year. Colleges urge students to carry a heavy subject load in the senior year in order to prepare for the rigorous loads and faster pace which they will encounter during college freshman year.

SENIOR MINIMUM CREDITS

All senior students at TJHS must be enrolled in a minimum of 5 credits during their senior year. The only exceptions to this rule are for individuals who are participating in a career internship, individuals dually enrolled in a college course(s), or those who have met with administration to get approval for other college/career related opportunities. The high school administration has the right to alter senior students' schedules who are not on track to graduate during the school year.

EARLY GRADUATION

As part of our commitment to student success and flexibility in education, seniors who are on track to meet all graduation requirements will be granted the option to leave high school early through our Early Graduation Program. This program recognizes the diligence and academic achievement of our seniors while providing them with the opportunity to pursue their post-secondary goals or career aspirations sooner. Eligible students will receive guidance and support to ensure a smooth transition and facilitate their continued growth beyond the high school environment. We believe that empowering students with this choice fosters independence, responsibility, and readiness for their future endeavors. Students interested in pursuing this option must meet with their counselor prior to the start of their senior year to guarantee that all required courses are scheduled in the fall of their senior year.

NCAA CLEARINGHOUSE

All students participating in athletics should be made aware that not all classes count towards the NCAA Clearinghouse. All athletes that are planning to participate in an NCAA sport are required to pass the NCAA Clearinghouse requirements. Please stop in to see your counselor or the athletic director when planning your courses in order to avoid scheduling issues and taking multiple courses to meet the requirements. More information on NCAA Eligibility can be found at http://fs.ncaa.org/Docs/eligibility_center/Student_Resources/CBSA.pdf

COURSE AUDITS

Students are permitted to audit courses for no credit provided that:

- Space is available in the course request
- Teacher approval is granted
- Student's existing schedule has free periods to assign course to be audited
- Course audit must begin within the first two weeks of the course

Although course audits do not carry any credit and do not affect class rank or quality point averages, the course audited and the grade earned (A, B, C, D, or Pass/Fail) will be typed on the student's Permanent Record Card at the end of each semester. A progress report will also be placed in the student's cumulative folder.

SAMPLE PROGRAM

GRADE-LEVEL	COLLEGE PREPARATORY	GENERAL	CAREER AND TECHNICAL EDUCATION
9	English 9 Social Studies Algebra I/Geometry Honors Biology*** World Language or other elective* Physical Education Computers	English 9 Social Studies Algebra I or Geometry Biology*** Physical Education Computer Elective Elective*	English 9 Social Studies Biology*** Algebra I*** Physical Education Software Apps/Computer Elective Arts and Humanities Elective - 1 cr
10	English 10 or Honors English Social Studies Geometry Honors Chemistry*** World Language or other elective* Physical Education/Health	English 10 Social Studies Geometry or Algebra II*** Chemistry*** Physical Education /Health Elective*	English 10 Social Studies Geometry*** Physical Science Technical Education - 4 credits Physical Education /Health
11	English 11 or AP English Social Studies Algebra II AP Physics or AP Chemistry*** World Language or other elective* Physical Education	English 11 Social Studies Algebra II or Pre-Calculus Physics*** Physical Education Elective*	English 11 Social Studies Algebra II *** Physical Education/Health Technical Education - 4 credits
12	English 12 or AP English Honors Comp. 12/Honors Lit. 12 Social Studies** AP Science or Science Elective*** Stats and Probability/Calculus or AP Calculus Physical Education 3 Electives**	English 12 Social Studies** Environmental Science/ Physics*** Pre-Calculus*** Physical Education 3 Electives**	English 12 Social Studies**** Environmental Science Physical Education Technical Education - 4 credits

*The elective must be one (1) full credit course or .5 credit course each semester.

**Must be used to meet Arts and/or Humanities requirements if not already met.

***Level of Mathematics and/or Science taken will depend on the Mathematics and/or Science taken the previous year and the grade earned.

****Must be used to meet Arts and/or Humanities requirements.

*****Each student and their counselor will determine which course better suits their career plans and academic needs.

OFFICIAL TRANSCRIPT


Starting with the Class of 2028, high school related courses taken during middle school will be listed on the official high school transcript for all students but will not include a letter or numerical grade attached. The following courses Algebra, Geometry, Biology, Spanish 1, and French 1 will appear on the official transcript but will not be factored into the overall GPA calculation. This approach will maintain consistency with our current GPA policy, which calculates GPA based only on high school courses.

For the Class of 2028, the transcript will include the course names and completion status without any grade information.

Beginning with the Class of 2029 course names and final grade(s) earned for these courses will be listed on the high school transcript. This will provide a more detailed record of the student's performance in these courses during their middle school years, without impacting the overall GPA calculation.

High school transcripts are a reflection of the work students do while in high school. The final course grade for each course a student completes is added to a student's transcript by using the letter grade that corresponds with a student's final percentage in the class. This is done in accordance with our grading scale. In addition to course grades, any work-based credential a student earns will be reflected on the official transcript from Thomas Jefferson High School. Performance on the state Keystone Exams for Algebra 1, Biology, and Literature are also included on the transcript.

Here is a sample transcript:

THOMAS JEFFERSON HIGH SCHOOL				Official Transcript				 West Jefferson Hills School District	
Student Information								Thomas Jefferson High School	
Student ID No: 99999								310 Old Clanton Road	
Birth Date: 01/01/2001								Jefferson Hills, PA 15025	
Name: Joe Student								Phone: 412-655-8810	
Address: 1234 Main Street								Fax: 412-655-8818	
Parent/Guardian Name(s): John & Jane Student								www.tjhsd.net	
Grad Year: 2019								Total Earned Credits: 21.950	
Grade Point Avg: 4.299								Printed: 02/22/2019	
Student Rank: 9								Counselor:	
Class Size: 0									

Grade Level	Course Title	GR	Credit Earned	Grade Level	Course Title	GR	Credit Earned
09	English Academic 1	A	1.000	10	English 2 Honors	A	1.000
09	Soc-Global I	A	0.500	10	Soc-Government	A	0.500
09	Soc-US Hist II	A	0.500	10	Soc-Economics	A	0.500
09	M-Honors	A	1.000	10	E-Soft Appl.	A	0.500
09	Secretary 9			10	M-Honors	A	1.000
09	Sc-Academic Biology	A	1.250	10	Algebra II	A	1.000
09	FL-Spanish 1	A	1.000	10	Sc-Accelerated Chemistry	A	1.250
09	PE-Gr 9-10	A	0.400	10	Sc-Anatomy/Physio	A	1.000
09	E-Health SS	A	0.250	10	FL-Spanish 2	A	1.000
09	E-Band	A	0.250	10	PE-Gr 9-10	A	0.400
09	E-Chorus	A	1.000	10	E-Band	A	0.250
			7.100				7.350

Grade Level	Course Title	GR	Credit Earned	Grade Level	Course Title	GR	Credit Earned
11	English 3 AP	A	1.000	12	Fab Fashion 1		0.000
11	Soc-AP US Hist	A	1.000	12	AP English Literature and Comp		0.000
11	M-Honors Calc/Tng	A	1.000	12	AP Calculus AB		0.000
11	Sc-Honors Physic	A	1.250	12	Band	A	0.250
11	Sc-AP Chemistry	A	1.450	12	Phys Ed 11/12		0.000
11	FL-Spanish 3	A	1.000	12	AP Biology		0.000
11	PE-Gr 11-12	A	0.400	12	AP European History		0.000
11	E-Band	A	0.250	12	AP Span w/Exam		0.000
			7.250				0.250

Test Scores														
ACT	Algebra		Biology		Lit		Keystone Exam Key							
	A		A		B									
	Test Date		English		Math			Reading		Science		Composite		Eng/Wrt
SAT	Test Date		SAT CR		SAT Math		SAT W		SAT MC		SAT Essay			
	04/2018		21		25		19		27		18			
	05/2018		500		500									
SAT Subject	Test Date		SUBJ 1		SUBJ 2		SUBJ 3		SUBJ 4		SUBJ 5			
	08/2018		OH-450		UH-530									

Signature: _____ Date: / / _____ Official Transcript Requires District Seal.

It is the policy of the West Jefferson Hills School District to maintain the confidentiality of the records of its students and to ensure that the records are not disclosed to unauthorized persons. The records are maintained in accordance with the provisions of the Family Educational Rights and Privacy Act (FERPA) and the Pennsylvania Public Access to Records Act (PAFARA).

West Jefferson Hills School District

Accreditation - Pennsylvania Department of Education

Voluntary Member of College Board



ENGLISH LANGUAGE ARTS

English Language Arts Courses

The Thomas Jefferson English program allows students the opportunity to be challenged in the areas of reading, writing, listening, speaking, and thinking. Classroom activities foster reading and listening comprehension; creative and critical expression; technical, library and study skills; and cultural literacy and appreciation. The high school English program provides for the needs of all students at all levels. Turnitin.com will be utilized for essay submissions at each level. Turnitin.com scans submitted essays to search for evidence of plagiarism within student writing.

English Summer Reading

Summer reading is part of the required curriculum for all students enrolled in the honors or AP levels of English. Selections and assignments will be distributed at the end of the school year and should be completed before entering each grade level in the fall.

LA1105 English 9



In this English course, students concentrate on developing reading, speaking, listening, writing, and critical thinking skills. Students read, analyze, and respond to a variety of literary genres including the short story, novel, drama, mythology, poetry, and informational texts with emphasis on close reading, vocabulary acquisition, providing textual evidence, and analyzing and interpreting both fiction and nonfiction. Students also work to develop skills in expository, persuasive, descriptive, narrative, and creative writing. The study of grammar and vocabulary will be emphasized during writing instruction. Communication skills that enable critical listening and effective presentation of ideas will be emphasized. Assessments include a variety of writing responses, quizzes, tests, projects, oral presentations, homework, and class participation.

Periods Per Week 5

Units of Credit 1

Semesters 2

LA1106 Honors English 9



In this honors level English course, students will work on developing close reading skills and focused writing strategies in order to prepare for future work in honors and Advanced Placement English courses. Students enrolled in this course should welcome academic challenges and demonstrate adept reading, writing, and critical thinking skills. The course will progress at a more rigorous pace and include more challenging readings compared with other ninth grade English course offerings. The writing requirements include an overview of all composition types expected in future honors/AP courses including but not limited to: research, literary criticism, expository/informative, and persuasive/argumentative. The study of grammar and vocabulary will be emphasized during writing instruction. Literary genres include the study of fiction, nonfiction, poetry, and drama. Students should expect to read independently outside of class and write frequently. Enrollment in this course requires a strong work ethic, good study habits, and the ability to work independently. A recommendation from the eighth grade reading and language arts teachers is highly advised for entrance into this class.

Prerequisites

Students must earn an "A" average in 8th grade reading/language arts classes. Additionally, they must score proficient or advanced on the literature PSSA. PVAAS literature projections will also be factored into the teacher recommendation process.

Periods Per Week 5

Units of Credit 1

Semesters 2

LA1110 English 10



The English 10 class focuses on a variety of literary genres in both fiction and non-fiction, including short stories, poems, novels, plays, speeches, and essays. The emphasis of the course is on reading and writing in order to prepare for the Keystone Literature Exam taken in May. Students will focus on writing short essays that use specific details from their texts as support for their main ideas and contain components of research. Students are expected to complete work outside of class independently, so organization and time management are necessary. Each unit of study focuses on necessary components of reading and writing, including author's purpose, text structure, point of view, theme, plot, characters, allegory, bias and propaganda techniques, literary elements, figurative language, and poetry terminology. Vocabulary and grammar are also major components of the English curriculum.

Periods Per Week 5

Units of Credit 1

Semesters 2

LA1112 Honors English 10



In this tenth grade honors English course, the student will continue to develop the reading and writing skills and strategies required for advancement into AP English. Students in this course should meet the challenges of a rigorous curriculum and have strong skills in reading, writing, and critical thinking. The course focuses on reading and exploring different genres of literature from all over the world and contains fiction and nonfiction selections on a more difficult reading level than the other tenth grade English courses. Students consider the author's purpose, audience, tone, and use of literary devices to enrich their understanding of each literary work. A major component of the course is building strong writers through frequent expository, persuasive, informative, literary analyses, and research-based writings in class and at home. In addition, the course emphasizes speaking skills that aid in clear communication. Because the class pace is accelerated and evaluative standards are high, students are awarded quality points under the honors scale. A recommendation from the ninth grade English teacher is highly advised for entrance into this class.

Prerequisites

Students must earn an "A" average in the ninth grade Academic English class or an "A" or "B" in the ninth grade Honors English class and have scored proficient on the PSSA Literature Examination. PVAAS literature projections will also be factored into the teacher recommendation process.

Periods Per Week 5

Units of Credit 1

Semesters 2

LA1117 English 11



The major thrust of the course is to develop an understanding of American literature, from the nineteenth to the twenty-first centuries, through a chronological approach emphasizing the values, techniques, and historical backgrounds for each literary period. Students will examine their native literature in oral and written expression with a balance of expository analyses and creative projects. The required research project involves career exploration.

Periods Per Week 5

Units of Credit 1

Semesters 2

LA1119 (AP) Advanced Placement English: Language and Composition



Students enrolled in this course should welcome academic challenges and demonstrate advanced reading, writing, and critical thinking skills. In this college-level English course, students read a wide variety of academic nonfiction texts and work to improve their writing style and analytical strategies through the study of rhetoric. As students digest the core texts, they examine how a given historical climate produces and influences literature. The writing requirements include an independent research project, rhetorical analysis essays, synthesis essays, and argument-based persuasive essays. By the end of the year, students should be able to closely analyze literature and write with a more focused sense of purpose and style. Students should be aware of how their writing fits with the occasion, the audience, and the purpose. Students who enroll in this course are prepared for and encouraged to take the AP English Language and Composition exam in the spring. A recommendation from the sophomore level English teacher is highly advised for entrance into this class.

Prerequisites

Students must earn an "A" or high "B" average in their sophomore-level English class (Honors or Academic) and score proficient or advanced on the Keystone Literature exam. PVAAS literature projections will also be factored into the teacher recommendation process.

Periods Per Week 5

Units of Credit 1

Semesters 2

LA1124 English 12



In English 12, students will explore British literature, spanning from the Anglo-Saxon period to contemporary works. Students will engage with a variety of literary genres while refining their reading, writing, and critical thinking skills. Additionally, the course includes a research project focused on the study and analysis of charities or non-profit foundations. This course is appropriate for students considering higher education, military service, and/or the professional workforce.

Periods Per Week 5

Units of Credit 1

Semesters 2

LA1120 Honors 12th Grade Literature



In Honors 12th Grade Literature, students will explore the literary motif of "The Quest" through the study of Beowulf, Hamlet, and 1984, write two short literary response essays and contemplate their own "quests" in light of lessons learned throughout the course. To this end, students will establish their own learning objectives at the beginning of the course and use concrete data to reflect on their growth in terms of achieving their learning objectives during the semester. Because the class pace is accelerated and evaluative standards are high, students are awarded quality points under the honors scale. This course is appropriate for students desiring a 12th grade English experience designed to emulate that of (and in preparation for) first year collegiate classes.

Periods Per Week 5

Units of Credit 1/2

Semesters 1

LA1121 Honors 12th Grade Composition



In Honors 12th Grade Composition, students will ask and answer their own research questions using APA research format through the composition of informative/ expository and persuasive essays, write narrative essays for use in applying for college scholarships, and their growth as a writer through the completion of a writing portfolio designed to potentially qualify students for exemption from first year composition courses at many top-tier colleges and universities. To this end, students will establish their own learning objectives at the beginning of the course and use concrete data to reflect on their growth in terms of achieving their learning objectives during the semester. Because the class pace is accelerated and evaluative standards are high, students are awarded quality points under the honors scale. This course is appropriate for students desiring a 12th grade English experience designed to emulate that of (and in preparation for) first year collegiate classes.

Periods Per Week 5

Units of Credit 1/2

Semesters 1

LA1129 (AP) Advanced Placement English: English Literature and Composition



Admission to this course is based on the provisions set forth in this handbook. This course includes classical, world, and English literature. After reading significant poetic works, plays, and novels, the students should be able to clearly express and logically defend their ideas. Critical thinking is balanced with creative expression so that these supporting ideas are not limited to discussions and compositions, but also include oral presentations and dramatic interpretations. Accordingly, the ability to work well in group situations is essential. Major assignments require the comprehension and application of secondary sources. Taking the AP test in May is an important component of this course and is highly encouraged. Quality points for this course are awarded under the advanced placement scale.

Prerequisites

Students must earn an "A" or high "B" average in their sophomore-level English class (Honors or Academic) and score proficient or advanced on the Keystone Literature exam. PVAAS literature projections will also be factored into the teacher recommendation process.

Periods Per Week 5

Units of Credit 1

Semesters 2

ELECTIVE ENGLISH COURSES

LA1148 Print Journalism - Yearbook



In this 21st century, cross curricular, project-based class, students work collaboratively by using technology such as digital cameras, photo editing software, and online design software to digitally produce a yearbook. Students use writing skills, communication skills, and creativity to tell the story of the school community and peers in an engaging way. Students demonstrate knowledge of graphic design and think creatively when organizing information within the yearbook. In this college and career ready course, students think critically to meet deadlines, track to goals, and utilize multimedia to market and disseminate information that aligns with and models an actual business. Attending school events outside of school hours is a requirement of the course.

Periods Per Week 5

Units of Credit 1

Semesters 2

LA1158 Reading in the Dark: Film as Literature



Students will apply literary critical reading skills to selected films and genres, recognize and study the implementation of literary devices in film, and understand how said literary devices can both help and harm a film's plot. Once a solid, baseline knowledge of these items has been achieved, students will study three relatively unknown genres of film, including horror, science fiction, and film noir, and students will also study the authorial styles of three prominent directors from each of these genres. Ultimately, students will demonstrate their ability to recognize, apply, and analyze course material in written analyses and presentations of student-selected films pertaining to the genres and authorial styles studied during class, hopefully improving their conception of quality filmmaking and improving their critical reading abilities along the way.

Periods Per Week 5

Units of Credit .5

Semesters 1

LA1157 Introduction to Film Criticism



Through a thorough study of filmmaking process, cinematic conventions, and three current genres of film, students will gain an appreciation and ability to "read" a film beyond its standard on-screen meaning for deeper understanding behind the goals and motivations of the film's director, producer, and producing studio. Using this knowledge, students will present their own critique of a film in which they identify the cinematic conventions used in their selected film to discern the message or goal of the director that lies beneath the visual surface of the film. Students will further apply these skills to films of three different genres (westerns, romantic comedies, and musicals). Ultimately, students will apply their knowledge of both cinematic conventions and genre to films from the selected genres of their own choosing, creating both verbal presentations and writing comparative essays. Through an introduction to the analysis of film, students will gain a more critical eye for the world around them and be more inclined to question and ponder events and occurrences that interest them.

Periods Per Week 5

Units of Credit .5

Semesters 1

LA1146 CHS Introduction to Public Relations



This course is designed as an introduction to public relations that provides a foundation for understanding the role and function of public relations and public opinion in American society, business and industry, and in the international community. Students are exposed to various modes of written and verbal communication and will work on fine-tuning their presentation skills. The course begins by defining public relations and works toward applying the knowledge gained in an agency setting. Students learn how to plan and execute an event, handle publicity and media relations, and write for professional publications. This class serves as a real-world exposure to the world of PR, similar to an internship experience. A CHS option through Waynesburg University is available for interested students.

Periods Per Week 5

Units of Credit .5

Semesters 1

LA1147 CHS Journalism



This course is designed to serve as an introduction to the world of journalism in the 21st century. We will begin the course by exploring the fundamental goals of a journalist and the ethics that should govern one's work. Once the basic principles have been covered, students will explore, analyze, and create journalistic works, both individually and within small groups. By the end of this course, students should be able to: identify audience and purpose, capture and sustain the audience's attention, understand the journalistic writing and editing process, use technology to gather and present information, and communicate effectively through written, verbal, and visual means. A CHS option through Seton Hill University is available for interested 11th and 12th grade students.

Periods Per Week 5

Units of Credit .5

Semesters 1

LA1153 Theater Production: From the Page to the Stage



This course, formerly known as Performing Arts, will take students through the process of putting on a play. The course will begin with play selection. Next, under the director's guidance, students will work their way through the entire production process, from acting, to directing, to costumes, lights and sets. There will be a final performance at the conclusion of the semester.

Please note: students can take this class multiple times. Students should have taken Theatre Orientation OR have theater experience prior to enrolling in the Theater Production Course.

Periods Per Week 5

Units of Credit .5 per Semester

Semesters 1 or 2

LA1143 CHS Public Speaking



This course benefits students looking to gain greater confidence in oral communication and/or those interested in careers in communications, education, law, business, or leadership in any field. Units in the ethics of communication, building confidence, speech organization, methods of delivery, and effective use of body, voice and language are included. The student is provided with the opportunity to develop communication skills in the preparation and delivery of speeches to inform, demonstrate, entertain, persuade and inspire. The student learns to think critically, express ideas clearly, gain confidence in front of an audience, and listen analytically to others. A CHS option through Seton Hill University is available for interested 11th and 12th grade students.

Periods Per Week 5

Units of Credit .5

Semesters 1

LA1152 Theatre Orientation



This one-semester course offering is for students with no or little theater experience and it introduces them to theatre at the high school while gaining performance skills and confidence. In this participation based course, the student takes the first steps in developing the voice, body, and mind as the tools of an actor through various activities and improvisation. The student has the opportunity to present a monologue, puppet show, lip sync, pantomime, and short play along with many other productions. Students will study dramatic literature, create performance pieces, and learn about staging. Students looking to get involved in the school's dramatic productions are encouraged to take this course.

Periods Per Week 5

Units of Credit .5

Semesters 1

LA1149 Comic Books and Graphic Novels



This course will begin by tracing the history of comic books and authors such as Stan Lee and continue into the development of the graphic novel. Students will have the opportunity to read a variety of comic books and graphic novels from Coraline to The Walking Dead to Miles Morales while covering a variety of genres such as horror, fantasy, and action/adventure. The course will study graphic novels as a form of literature, while also examining the use of art, text, type, and design. Students will trace the hero's journey, study character development, and examine the role of women in the comic genre. Students will find the connections between comics and film adaptations and create their own graphic novel panels. In this course, students will be able to connect literature to art, history, and more.

Periods Per Week 5 or Possible A/B Day

Units of Credit .5

Semesters 1

LA1151 CHS Digital Media Communication



CHS Digital Media Communication is a project-based class structured to allow students the ability to take a course focused on recording our school's events as they happen and sharing them with the student body, staff, and community through text, images, audio, and videos. Students will work on mastering a variety of skills, including: research, reporting, interviewing, surveying/polling, drafting, writing, editing, revising, photography, filming, audio, video editing, layout design, and social media management. CHS Digital Media Communication enables students to collaborate with multiple departments, classes, students, teachers, staff members, sports, and activities to utilize 21st century skills and create interesting and relevant content that informs and interests their school and community. It is important that students enrolled in the course be able to attend events both in and out of school. Topics of study include the fundamentals of journalism, the writing process, photography/editing and multimedia skills. A CHS option through Seton Hill University will be available for interested 11th and 12th grade students.

Periods Per Week 5 or Possible A/B Day

Units of Credit .5

Semesters

If half year = 1;
if full year
opposite gym/
lab = 1

MATHEMATICS

[Click here to see the suggested traditional mathematics course pathways.](#)

The mathematics program at Thomas Jefferson High School is a contemporary approach to teaching mathematics that exposes all students to a variety of math topics including algebra, geometry, probability, statistics, logic, and discrete math. The program is in complete compliance with national and state standards. In addition, successful completion of the program through Pre-calculus/Trigonometry assures that each student has been introduced to the skills and background necessary for success in subsequent post-secondary math courses.

The mathematics department wants all students to succeed and reach their highest potential. In order to achieve this goal, the teachers in the mathematics department examine many different data points. These data points include, but are not limited to, MAP scores (Rit and Growth), Keystone Exam scores, PSSA scores, PSAT scores, PVAAS projections, Midterm and Final Exam scores, current course grades and future aspirations. In conjunction with the guidance department, the mathematics department uses this data to recommend the most appropriate course for each student.

Any student in grade 8 that is enrolled in the Algebra I class at PHMS who does not take or does not pass the Algebra I Keystone exam will automatically be re-enrolled in Algebra I in grade 9. The only exceptions will be made if students remediate and take the Algebra I Keystone exams again during the summer wave in July/August.

Calculator Policy: Students at Thomas Jefferson High School may be required to purchase or rent a scientific or graphing calculator for use during their math course(s) at TJHS. Students are permitted to use a scientific calculator on the Algebra I Keystone Assessment given at the end of the Algebra I course. The School district recommends a TI 84 or its equivalent for advanced mathematics courses that require a graphing calculator. Students will have the ability to rent a calculator from the math department at a cost of \$30 for the 2024-2025 school year.

Click  to see a short video description



MA1300 Pre-Algebra



This full-year course is designed for students who have completed a middle school mathematics sequence but are not yet Algebra-ready. This course reviews key algebra readiness skills from the middle grades and introduces basic Algebra I work with appropriate support. Students revisit concepts in number and operations, expressions and equations, ratio and proportion, and basic functions. By the end of the course, students are ready to begin a more formal high school Algebra I study.

Periods Per Week 5

Units of Credit 1

Semesters 2

MA1301 Algebra I



This course will develop the foundational skills used in all future mathematics courses. This course will focus on solving equations, and while much emphasis is placed on linear functions, students will also be introduced to factoring quadratic expressions, which is an essential skill for subsequent courses. In addition, students will solve simple and compound linear inequalities and graph their solutions on a real number line. They will also solve and graph systems of linear equations and inequalities. Students will be required to apply these skills in real-world situations such as seeing the slope of a function as a rate of change and creating a line of best fit to make predictions based on a set of data. An introduction to Data Analysis and Probability is given. Students will take the Keystone Algebra I exam at the culmination of this course. Upon successful completion of Algebra I, students should enroll in Geometry.

Periods Per Week 5

Units of Credit 1

Semesters 2

MA1304 Geometry



This course offers a thorough introduction to the basic concepts of Euclidean Geometry and prepares students for the geometry portion of the SAT test. Students will apply the characteristics of angles as well as parallel and perpendicular lines. They will write algebraic and geometric proofs that focus on congruence and similarity. Students will explore the properties of polygons with the main emphasis on the different types of quadrilaterals. Students will find the surface area and volume of multiple three-dimensional shapes such as prisms, pyramids, cylinders, cones and spheres. Students will be introduced to properties of circles and to right triangle trigonometry. Students must have satisfactorily completed Algebra I to enroll in this course since much emphasis is placed on the application of algebra skills. Upon successful completion of this course, students would take either Algebra II or Algebra II B (teacher recommendation only).

Periods Per Week 5

Units of Credit 1

Semesters 2

MA1305 Honors Geometry



This is a fast-paced, rigorous course that offers a thorough investigation of Euclidean Geometry through a series of conjectures and formal proofs. Students will explore and apply the theorems of triangle congruency as well as properties of polygons, circles, and various three-dimensional objects. Other course topics include: determining the perimeter and area of two-dimensional shapes, calculating the surface area and volume of prisms, pyramids, cylinders, cones and spheres, and applying probability to geometric situations. Students will study and apply the various properties of circles including arc length and the area of sectors. They will also be introduced to right triangle trigonometry and its applications. Upon successful completion of the course, students are eligible to take Honors Algebra II or Algebra II.

Prerequisites

Students must earn an "A" average in Algebra I. Additionally, they must score proficient or advanced on the Algebra I Keystone and 8th grade Math PSSA. PVAAS mathematics data and projections will also be factored into the teacher recommendation process.

Periods Per Week 5

Units of Credit 1

Semesters 2

MA1302 Algebra II



Algebra II develops advanced algebra skills in concepts such as solving and graphing all of the following types of functions: quadratic, absolute value, polynomial, radical, rational, exponential and logarithmic. Students will develop an understanding of function notation, inverse functions and the complex number system. The course also introduces students to probability and statistical analysis required for the SAT exam. Calculator use in this course is limited. This course prepares students for Algebra 3 and Trigonometry, Precalculus and Trigonometry or Probability and Statistics.

Grade Recommendations for Algebra II: "C" or higher in Geometry, students must have also scored advanced or proficient on the Keystone Algebra I exam. PVAAS mathematics data and projections will also be factored into the teacher recommendation process.

Periods Per Week 5

Units of Credit 1

Semesters 2

MA1302B Algebra II B

Algebra II B develops advanced algebra skills while focusing on reviewing foundational algebraic concepts. This course will enhance previously learned algebraic topics such as number/integer operations, exponent properties, solving equations and inequalities. Advanced algebra topics such as solving and graphing all of the following types of functions: absolute value, quadratic, polynomial, radical, rational. Students will develop an understanding of function notation, and the complex number system. This course prepares students for Algebra 3 and Trigonometry, or Probability and Statistics. Students will be placed in this course by teacher recommendation only.

Periods Per Week 5

Units of Credit 1

Semesters 2

MA1303 Honors Algebra II



Honors Algebra II is a rigorous course in which students will cover all topics of a traditional Algebra II class at a faster pace and more in-depth. Students will also study several additional concepts such as solving systems of equations that combine linear and quadratic functions both graphically and algebraically. Students will work extensively with graphing rational functions by finding their points of discontinuity and describing their end-behavior. To prepare students for Honors Precalculus and Trigonometry, time is devoted to the study of trigonometric functions beginning with a review of right triangle trigonometry and moving into the study of the six trigonometric functions. Students will work with both degree and radian measure of angles and begin the study and application of the unit circle. In order to prepare students for the SAT exam, students will also complete units on data analysis and probability. Calculator use in this course is extremely limited. Upon successful completion of this course, students would traditionally take either Honors Precalculus and Trigonometry or Precalculus and Trigonometry, although students could elect to take Algebra 3 and Trigonometry or Probability and Statistics.

Prerequisites

Students must earn an 85% average in Honors Geometry. Additionally, they must score proficient or advanced on the Algebra I Keystone and 8th grade Math PSSA. PVAAS mathematics data and projections will also be factored into the teacher recommendation process.

Any student that is NOT enrolled in high school Honors Geometry course or the 8th grade Geometry course will not be recommended to take Honors Algebra 2. Any student that is not currently enrolled in high school Honors Geometry course or the 8th grade Geometry course and wishes to be enrolled in the Honors Algebra 2 course, will be required to complete the cumulative final exam from the current high school Honors Geometry course. Students must score 70% on the final in order to be placed into Honors Algebra 2. Students will have 2 chances to pass the exam and the exam will be given on 2 different dates. One date will be at the end of the current school year and the other date will be over the summer. Both dates will be determined by Thomas Jefferson High School administration and Mathematics department.

Periods Per Week 5

Units of Credit 1

Semesters 2

MA1323 Algebra III/Trigonometry



Algebra III and Trigonometry will extend students' knowledge of functions, focusing heavily on solving linear, quadratic, absolute value, rational, radical, higher-order polynomial, logarithmic and exponential equations. Students will review graphing transformations of parent functions as well as learn to graph rational functions by determining their points and types of discontinuities. Students will extend their knowledge of horizontal and vertical asymptotes to graph transformations of exponential and logarithmic functions. Students will deepen their knowledge of right triangle trigonometry to the study and application of the unit circle. Students will discover and apply various trigonometric relationships, and graph the six trigonometric functions. Students enrolling in this course would do so after completing Algebra II. Students would select this course, as opposed to Precalculus and Trigonometry, if they felt as if they needed more work on algebraic topics and were not planning on taking Calculus in high school.

Upon successful completion of this course, students would typically enroll in Probability and Statistics.

Grade Recommendations for Algebra 3 and Trigonometry: "C" or higher in Algebra 2

Periods Per Week 5

Units of Credit 1

Semesters 2

MA1320 Pre-Calculus/Trigonometry



Precalculus and Trigonometry is a college-preparatory course for students who have successfully completed Algebra II and is designed to extend their knowledge of algebraic, geometric and trigonometric concepts. Algebraic course topics range from a review of parent functions to furthering the study of polynomial and rational functions. Students will extend geometric concepts of right triangle trigonometry to the study of the unit circle. Students will establish and apply trigonometric identities as well as solve trigonometric equations, and graph trigonometric functions. Students will apply the Law of Sines and Law of Cosines as well as graph polar equations. Calculator use in this course is limited. This course prepares students for Calculus.

Grade Recommendation for Precalculus and Trigonometry: "B" or higher in Algebra 2 or "C" or higher in Honors Algebra 2

Periods Per Week 5

Units of Credit 1

Semesters 2

MA1321 AP Precalculus



AP Precalculus is a fast-paced, rigorous, course for advanced students who have successfully completed Honors Algebra II. It is designed to extend students' knowledge of algebraic, geometric and trigonometric concepts. Students will explore topics in three tested units: polynomial and rational functions, exponential and logarithmic functions, and trigonometric and polar functions. Additionally, students may be introduced to a unit on functions involving parameters, vectors and matrices, though this material is not tested in the AP exam. Quality points for this course are awarded according to the district policy. This course prepares students for Advanced Placement Calculus or Calculus.

Students must earn at least an 85% average in Honors Algebra II. PVAAS mathematics data and projections also will be factored into the teacher recommendation process.

Prerequisites

Any student that is NOT enrolled in Honors Algebra 2 will not be recommended to take AP Precalculus. Any student that is not currently enrolled in Honors Algebra 2 and wishes to be enrolled in the Honors Precalculus course, will be required to complete the cumulative final exam from the current high school Honors Algebra 2 course. Students must score 70% on the final in order to be placed into Honors Precalculus. Students will have 2 chances to pass the exam and the exam will be given on 2 different dates. One date will be at the end of the current school year and the other date will be over the summer. Both dates will be determined by Thomas Jefferson High School administration and Mathematics department.

Periods Per Week 5

Units of Credit 1

Semesters 2

MA1324 Calculus



The Calculus course is a rigorous course that covers many of the topics typically taught in a traditional college Calculus 1 course. This course is intended for students that have successfully completed either Precalculus and Trigonometry or Honors Precalculus and Trigonometry. Students must have a solid background in algebra and trigonometric topics covered in previous courses. It is highly recommended that students pass the ALEKS placement exam with a score of 61 or higher to ensure success in the course. The course starts with a brief review of some of the necessary prerequisite algebra skills including graphing functions and solving equations. Then the course moves into the study of calculus topics including Limits, Differentiation and Integration. Additionally, applications of each calculus topic are studied throughout the course. Calculator use in this course is extremely limited. This course prepares a student for a college Calculus class.

Grade Recommendation for Calculus: "B" or higher in Honors Precalculus & Trigonometry or an "A" in Precalculus and Trigonometry.

Periods Per Week 5

Units of Credit 1

Semesters 2

MA1325 CHS Business Calculus



This Calculus course is a rigorous course that covers all of the topics typically taught in a traditional college Business

Calculus course. The curriculum will follow that of the University of Pittsburgh's Math 0120. Upon successful completion of the course, students can earn 4 college credits. There is no AP exam for this course. This course is intended for students who have a strong background in algebraic manipulation, including work with logarithmic and exponential equations/expressions. To be eligible to take this course for college credit, students must score a 61 or higher on the ALEKS placement exam. Students that do not pass the ALEKS placement test with a score of 61 will not be recommended to take the course. If a student wishes to take the course for high school credit, they will need to follow the override process outlined earlier. Business Calculus is designed for students who plan to major in business, economics or other social sciences and is not intended for students who plan on majoring in science, engineering or mathematics. Calculators are not used in this course. Quality points for this course are awarded according to the district policy.

The topics of study include Limits, Differentiation and Integration. Application of these topics is a fundamental element of this course, and students will spend a great deal of time learning how mathematics can be applied to real world business situations like profit maximization, break-even points, cost/loss minimization, optimization, and marginal analysis.

Prerequisites

Students must earn an "B" average or higher in Honors Precalculus/Trigonometry. PVAAS mathematics data and projections will also be factored into the teacher recommendation process.

Periods Per Week 5

Units of Credit 1

Semesters 2

MA1326 (AP) CHS Advanced Placement Calculus AB



The AP Calculus course is an extremely rigorous and challenging course that covers all of the topics typically covered in a traditional college Calculus 1 course. This course is designed to meet the curricular requirements for both Advanced Placement and the University of Pittsburgh's Math 0220. Students enrolled in the University of Pittsburgh class will have the chance to earn 4 college credits. Taking the AP test in May is a very important component of the class, and it is highly recommended that all students enrolled in the course take the AP test. This course is intended for students that have successfully completed Honors Precalculus and Trigonometry and have received a recommendation from their Honors Precalculus and Trigonometry teacher. Quality points for this course are awarded according to the district policy. This course is intended for students who plan on majoring in science, engineering or mathematics, etc. **To be eligible to take this course for college credit, students must pass the ALEKS placement test with a score of 76 or higher prior to the start of the course. Students that do not pass the ALEKS placement test with a score of 76 will not be recommended to take the course. If a student wishes to take the course for high school credit, they will need to follow the override process outlined earlier. Calculators are not permitted on University of Pittsburgh exams but can be used on the AP test.** The topics of study include Limits, Differentiation and Integration. Applications of each of these topics are also taught in great detail. Additionally, key theorems (including the Intermediate Value Theorem, Extreme Value Theorem, Mean Value Theorem, Rolle's Theorem, Fundamental Theorem of Calculus) are explained, discussed and stressed.

Prerequisites

Students must earn at least an 85% average in Honors Precalculus/Trigonometry. PVAAS mathematics data and projections will also be factored into the teacher recommendation process.

Periods Per Week 5

Units of Credit 1

Semesters 2

MA1327 (AP) CHS Advanced Placement Calculus BC



The AP Calculus course is an extremely rigorous and challenging course that covers all the topics typically covered in a traditional Calculus 2 course. This course is designed to meet the curricular requirements for both Advanced Placement and the University of Pittsburgh's Math 0230. Students enrolled in the University of Pittsburgh class will have the chance to earn 4 college credits. Taking the AP test in May is a very important component of the class, and it is highly recommended that all students enrolled in the course take the AP test. This course is intended for students that have successfully completed AP Calculus AB and have received a recommendation from their AP Calculus AB teacher. Calculators are not permitted on University of Pittsburgh exams but can be used on the AP test. Quality points for this course are awarded according to the district policy.

The course will include a review of Limits, Differentiation, Integration and the applications of these topics. New topics will include additional integration methods and applications, L'Hopital's Rule, Improper Integrals, Series and Sequences, Polar Coordinates, Parametric Equations, Vectors and an introduction to Differential Equations.

Prerequisites

"B" or higher in AP Calculus AB

Periods Per Week 5

Units of Credit 1

Semesters 2

MA1340 Probability and Statistics



This course is designed to provide an introduction to the foundations of probability and statistics. Topics will include probability, normal distributions, confidence intervals, and hypothesis testing. This course is designed for the students that have already completed Algebra 2 successfully. **Students are required to have a TI-83 or TI-84 graphing calculator. If students do not wish to purchase one, they can rent one from the district for \$30 for the school year.**

Periods Per Week 5

Units of Credit 1

Semesters 2

MA1341 (AP) Advanced Placement Statistics



This is a rigorous and challenging Advanced Placement course that prepares students to take the AP Statistics exam upon its completion. Throughout the course, students will learn to select appropriate methods for collecting and analyzing data, represent patterns and trends in data numerically and graphically, compare distributions of data, use probability and simulation to study random events, and develop and justify an argument based on evidence from data, definitions and statistical inference. Units of study include: exploring one and two-variable data, collecting data, probability, random variables and probability distributions, sampling distributions, inference for categorical data: proportions, inference for categorical data: chi-square, and making inferences using quantitative data. Taking the AP test is a very important component of the class, and it is highly recommended that all students enrolled in the course take the exam. Quality points for this course are awarded according to the district policy. **Students are required to have a TI-83 or TI-84 graphing calculator. If students do not wish to purchase one, they can rent one from the district for \$30 for the school year.**

Prerequisites

Students should have passed Honors Algebra 2 with a "B" or higher. The math department recommends that students also pass Honors Precalculus/ Trigonometry with a "B" or higher prior to taking AP Statistics, but a minimum of Honors Algebra 2 is required. PVAAS mathematics data and projections will also be factored into the teacher recommendation process.

Periods Per Week 5

Units of Credit 1

Semesters 2

MA100 Keystone Algebra

This course is designed for the student that has not shown proficiency on the Keystone Algebra Exam. Keystone Algebra is tailored to address the needs of individual students based on student-specific test data. Content emphasis will be placed on the assessment anchors and eligible content identified as "needs" in the Individual Student Reports.

Periods Per Week 5

Units of Credit .5

Semesters 1



SCIENCE

The philosophy of the Science Department at Thomas Jefferson High School is to educate every student in the disciplines of the life sciences and the physical sciences. The purposes of scientific investigation and discovery are to satisfy one's quest for knowledge and understanding and to preserve and enhance the quality of life experience. We as teachers will work diligently to expose today's youth to the richness and excitement of scientific discovery through reading, writing and analysis of scientific problems. As educators, it is our duty to further our education in the scientific world, which is continuously changing. We must make informed decisions regarding contemporary issues by taking into account economic cost, respect for living things and public policy and legislation. The development of a scientific mind requires curiosity, patience, persistence, attention to accuracy and precision, and the respect for historical contributions.

BIOLOGY COURSES

SC1410 Biology



This is a challenging biology course designed for ninth grade students. It includes lectures, class discussions and weekly hands-on laboratory inquiries, which will develop observation, reasoning and critical thinking skills. Students will explore such topics as: biological principles, the chemical basis of life, cell structures and processes, bioenergetics, homeostasis and transport, cell growth and reproduction, genetics, evolutionary theories, and ecology.

Periods Per Week 5

Units of Credit 1

Semesters 2

SC1409 Honors Biology



This is a rigorous biology course designed for ninth grade students who have performed above average in middle math and science. This course is recommended for students who are planning to take higher level science courses throughout high school and are considering a career in a science related field. It includes lectures, class discussions and weekly hands-on laboratory inquiries, which will develop observation, reasoning and critical thinking skills. Students will explore such topics as: biological principles, basic chemistry and biochemistry, cell structures and processes, bioenergetics, homeostasis and transport, cell growth and reproduction, genetics, evolutionary theories, and ecology.

Grade Recommendations: "B" or higher in Middle School Science and Algebra I. Additionally, PVAAS Biology projections will also be factored into the teacher recommendation process.

Periods Per Week 5

Units of Credit 1

Semesters 2

SC1426 (AP) Advanced Placement Biology



This collegiate level course is designed to prepare students for the AP Biology test and is equivalent to an introductory biology course offered to college freshmen intending to major in a biological science. This is a broadly based course that has been aligned with the Four Big Ideas of Biology as defined by the College Board. There are extensive studies of cellular and molecular biology as well as genetics, biochemistry, cellular energetics, evolution and environmental science. Laboratory work includes the use of various types of laboratory apparatus and instruments which are incorporated into exercises designed to complement and supplement lecture topics and enhance science practice skills. The designs of the labs are inquiry based when applicable. Taking the AP test in May is an important component of this course and is highly encouraged. AP classes may require a summer work assignment. Students selecting this course must have a recommendation from their current science teacher or must meet with the current AP Biology teacher to receive a recommendation to take the course.

Students must have access to a computer with internet access to complete the required Mastering Biology assignments and study sessions.

AP Chemistry will provide a strong foundation for the biochemistry of the course and is encouraged.

Grade Recommendations: Must have a "B" or higher in Honors Biology and a "B" or higher in Honors Chemistry/ Chemistry. Students taking AP Biology must have earned a proficient or higher on the Keystone Biology Exam.

Periods Per Week 7.5

Units of Credit 1.5

Semesters 2

SC102 Principles of Biology

This course is designed for the student that has not shown proficiency on the Keystone Biology Exam. Principles of Biology is tailored to address the needs of individual students based on student-specific test data. Content emphasis will be placed on the assessment anchors and eligible content identified as "needs" in the Individual Student Reports.

Periods Per Week 5

Units of Credit 0.5

Semesters 1 & 2

CHEMISTRY COURSES

SC1401 Physical Science



A comprehensive study of matter and energy will be presented. Students will develop an understanding of the basic principles of chemistry and physics and will be prepared for additional courses in science. This course is recommended for students who may not be ready to move on to Chemistry based on their prior work in Biology or may be taken to allow time for their Math skills to develop before entering a more rigorous Science course. Students are exposed to a broad spectrum of science study while developing critical thinking and problem-solving skills that are needed in our ever-changing modern technological world. A variety of instruction including some experiments and activities will be used to accommodate students with different learning styles.

Periods Per Week 5

Units of Credit 1

Semesters 2

SC1417 Chemistry



This introductory course investigates the fundamental concepts of chemistry. Topics include scientific measurement, properties of matter, atomic structure, and the periodic table, ionic and covalent bonding, chemical nomenclature, chemical reactions, thermochemistry, gas laws, solutions and acids and bases. Laboratory work is an integral part of the course and includes experiments that reinforce the concepts presented in lecture. Practical applications of chemistry to the student's daily life are emphasized throughout the course.

Grade Recommendations: "C" or higher in Honors Biology / Biology

Periods Per Week 5

Units of Credit 1

Semesters 2

SC1415 Honors Chemistry



This course is designed to prepare students for the challenges of a college level chemistry course and is a prerequisite for AP Chemistry. It is recommended for those students planning to major in the sciences, mathematics or engineering. The topics covered include: matter, energy, measurements, problem solving, thermochemistry, atomic theory, quantum mechanics, periodic law, ionic and covalent bonding, chemical nomenclature, chemical reactions, solids, liquids, gases, acids and bases, and equilibrium. Learning is accomplished through lecture, reading, research, cooperative learning, laboratory experiments, and writing formal laboratory reports.

Grade Recommendations: "B" or higher in Honors Biology – "B" or higher in Algebra and Geometry and a proficient score on the Algebra Keystone Exam

Periods Per Week 5

Units of Credit 1

Semesters 2

SC1427 (AP) Advanced Placement Chemistry



The AP Chemistry course is designed to be the equivalent of the general chemistry course usually taken during the first year of college. For some students, this course enables them to undertake, as a freshman, second-year work in the chemistry sequence at their institution. For other students, the AP Chemistry course fulfills the laboratory science requirement of their school and frees time for other courses. Therefore, this course is designed solely to prepare students to take the AP chemistry test. This course is recommended for those planning to enter the fields of pure and applied science, medicine or engineering. The topics covered are: advanced stoichiometry, gases, advanced bonding theory, quantum mechanics, solutions, chemical kinetics, chemical equilibrium, acids and bases, titrations, buffers, thermodynamics, electrochemistry, nuclear chemistry and organic chemistry. Learning is accomplished through lecture, laboratory work, demonstrations and the completion of AP style examinations. Taking the AP test in May is an important component of this course and is highly encouraged. Students selecting this course must see the appropriate teacher before the end of the previous school year.

Grade Recommendations: "B or higher in Honors Chemistry "B or higher in Algebra II or Honors Algebra II"

Periods Per Week 7.5

Units of Credit 1.5

Semesters 2

PHYSICS COURSES

SC1423 Physics



Physics is designed for the student who does not plan to pursue a career in a science-related field but who desires to have a well-balanced education in science. The student will be exposed to concepts from various fields of study within physics all the while maintaining an approach of real-world application supported by mathematical analysis. This course is recommended for students who have passed Chemistry or excelled in Physical Science. With the application of mathematical analysis, it is recommended that students be concurrently taking Algebra II or a more advanced math to be successful in this course.

Periods Per Week 5

Units of Credit 1

Semesters 2

SC1422 (AP) Advanced Placement Physics 1



This first year physics course is the next step for students who have been successful in the Honors sequence of science courses. The course is designed for those students to earn general science college credit (4 credits Algebra based Physics*) with the appropriate passing score on the AP Exam as designated by the college or university of their choice. The topics of study are: systems of units, linear motion, projectile motion, vectors, torques, gravitation, work, energy, momentum, and rotational motion. The fundamentals will be emphasized through classroom discussions, lectures, and labs. There is a strong emphasis on both problem solving and explanation of concepts in AP Physics 1. Equations are developed through lab experience, which will enhance the student's understanding of difficult concepts. Some advanced theories including fluid mechanics, optics, waves, light, thermodynamics, nuclear physics (transmutation equations, half-life, and binding energy), electric charges, electrical and basic circuitry may be introduced for student enrichment. Taking the AP Physics 1 test in May is an important component of this course and is highly encouraged. It is highly recommended that students have successfully completed Algebra II or a more advanced math.

*While every College/University is different, Algebra based Physics is generally sufficient for elective science credit for degrees in many fields but may not be accepted for STEM related majors.

Grade Recommendations: "A" in Chemistry OR "B" or higher in Honors Chemistry
"B" or higher in Algebra II, and all previous math courses.

Periods Per Week 7.5

Units of Credit 1.5

Semesters 2

SC1430 (AP) Advanced Placement Physics 1 & 2



This first year physics course is designed for those students who excel in mathematics and science and who plan on entering the fields of physics or engineering, or other related STEM fields. The course is designed for those students to earn general science college credit (4 or 8 credits of Algebra based Physics*) with the appropriate passing score on the AP Exam(s) as designated by the college or university of their choice. This course is similar in content to AP Physics 1, but covers the additional topics of electricity (electric potential, electric fields), magnetism, and quantum physics. Also the mathematical rigor of this course is much more difficult than AP Physics 1. No previous physics course is required to enter into AP Physics 1 & 2. Taking the AP test(s) in May is an important component of this course and is highly encouraged. Students can register for the AP Physics 1 Exam or the AP Physics 2 Exam. Some may choose to take both exams. This course is also available to physics students who want to take a second year physics course but do not meet the parameters set forth in AP Physics C. It is highly recommended that students have successfully completed, or have concurrent enrollment in Honors Pre-Calculus.

*While every College/University is different, Algebra based Physics is generally sufficient for elective science credit for degrees in many fields but may not be accepted for STEM related majors.

Prerequisites

"A" in Honors Chemistry
"A" in previous on-level Math Courses
"B" or higher in previous HONORS Math Courses
"A" in Physics (if taking AP1&2 as a 2nd year Physics)

Periods Per Week 7.5

Units of Credit 1.5

Semesters 2

SC1428 (AP) Advanced Placement Physics C



This second year calculus based physics course is intended for senior students who plan to enter the fields of engineering and/or physics, or other related STEM fields. The course is designed for those students to earn college credit (4 or 8 credits of Calculus based Physics**) with the appropriate passing score on the AP Exam(s) as designated by the college or university of their choice. This course focuses on an in depth study of Newtonian Mechanics and Electromagnetism. This physics course integrates the calculus based concepts of limits, derivatives, integrals and differential equations. This course will include rigorous problem solving and derivations, conceptual development, and preparation for the AP Exam in May. Taking the AP test(s) in May is an important component of this course and is highly encouraged. Students can register for the AP Physics C Exam in Mechanics or Electricity and Magnetism. Some may choose to take both exams. Students must have successfully completed or have concurrent enrollment in Calculus. To be successful in this class, it is also recommended that students have performed above average in their previous physics course.

**While every College/University is different, Calculus based Physics is generally sufficient for STEM related major requirements, though some may or may not include lab credit.

Prerequisites

"A" in AP Physics 1
"B" or higher in AP Physics 1&2
"A" in Trig/Pre-Calculus
"B" or higher in Honors Pre-Calculus
Completed or Concurrent Enrollment in Calculus or Higher

Periods Per Week 7.5

Units of Credit 1.5

Semesters 2

ADDITIONAL SCIENCE COURSES

SC1419 Environmental Science

This course will focus on the foundations of studying the environment, natural resources and energy use. Environmental Science takes concepts from Biology, Chemistry, Ecology, Geology, and the Social sciences. The course topics include Studying the Environment; Ecology and the Natural World; and Resources from Air, Water, and Land. Class structure includes case studies, practical and simulated labs, and group and individual projects. This course is recommended to a student who has completed biology and physical science or chemistry that wants to further their studies of environmental topics. This course will meet the third year science requirement needed for graduation for students who have completed physical science.

Periods Per Week 5

Units of Credit 1

Semesters 2

SC1420 (AP) Advanced Placement Environmental Science

Advanced Placement Environmental Science ("APES") is a college-level environmental course. This course is taught as a traditional science course, incorporating laboratory activities, virtual activities, short-term projects, long-term studies, field investigations, and the use of technology for gathering data. Experiences in the laboratory field and through virtual internet labs will provide students with opportunities to relate classroom concepts to real-world applications of environmental science. Through these experiences, students will be recording data, gathering evidence and presenting it to their peers verbally and in writing in different formats both digitally and via poster sessions. Students will be able to explore specific real-world environmental issues and gain an awareness of the science behind these issues. Students will explore the impact of our growing human population and understand they have a stake in the future of the environment.

Periods Per Week 7.5

Units of Credit 1.5

Semesters 2

SC1431 CHS Anatomy and Physiology

CHS Anatomy & Physiology is a college level course providing an introduction in Human Anatomy and Physiology, aimed at preparing students who are interested in pursuing a career in the biological/health sciences or medical field. This course is typically offered to juniors and seniors. Sophomores who have successfully completed Honors Biology may elect to take this course. This course will examine the structure and function of the human body including the study of cells, tissues, and the following major body systems; integumentary, skeletal, muscular, nervous, cardiovascular, respiratory, digestive, and urinary system (if time permits). The goal of the course is to develop student understanding of the human body both in terms of structure and function. Anatomy & Physiology is difficult in nature and time will be required outside of class to properly prepare for exams and practicals. Laboratory components, including anatomical studies using microscopy and dissection and the study of physiological concepts via experimentation, are also an integral part of this course. This course was approved for both A&P I and A&P II through a partnership with Carlow University. Students will not be able to register for A&P II without first having registered and completed semester 1 (S1) of this course with at least a C grade. Upon completion of this course, students will have the opportunity to earn up to 8 college credits.

Grade Recommendations: "B" or higher in Honors Biology/Biology

Periods Per Week 5

Units of Credit 1

Semesters 2

This course is offered to students who have completed the recommended science courses and want to further their study to what exists beyond the Earth's atmosphere. The course focuses on an "Earth-Out" approach to studying the universe, beginning with what students are familiar with (the rotation of the Earth, seasons, moon cycles, constellations) and extends outward to study our Sun, the other planets in our solar system, the Milky Way galaxy, and finally the universe as a whole. The student will gain a fundamental understanding of the universe and our place in it. We will also explore the possibility of occurrences of life in other parts of the universe.

It is important that students who are choosing to take Astronomy have a strong interest in science and have already completed biology and chemistry and have completed or are concurrently taking physics, as important themes from each will be incorporated into the astronomy class. As such, the course enrollment will be limited to Junior and Senior students. **PLEASE NOTE: As a 0.5 credit, semester course, Introduction to Astronomy is an elective, and does not fulfill the required three science credits.**

Periods Per Week 5

Units of Credit .5

Semesters 1



SOCIAL STUDIES

Social Studies Courses

The goal of the Social Studies Curriculum is to prepare our students to take their place in American and World Society. Students are required to develop skills analogous to that of the historian—i.e. a problem solver. In addition, students obtain a knowledge and understanding of both American and World History. This combination of skills and understanding prepares Thomas Jefferson High School students to face an ever changing and complex global society.

Core Courses (Required for All Students)

GRADE 9	Civics and Government
	Honors Civics and Government
GRADE 10	World History
	AP World History
GRADE 11	U.S. History
	AP U.S. History
GRADE 12	

Students have the option of taking one credit of Social Studies or Science during Grade 12. Students choosing to fulfill this credit in Social Studies may choose from electives to satisfy the one credit requirement. All Social Studies Electives are open to 10th - 12th grade students.

Click  to see a short video description

9TH GRADE

This course will provide students with an understanding of American civics and government. This course will allow students to engage in real world application and analysis of our political system. Topics addressed in the course include: civic responsibility, the Constitution, and the workings of the federal, state, and local levels of our government. Students will be evaluated through various means including examinations, homework, projects, worksheets, and in-class activities.

Semesters 2

This course will provide students with an understanding of American civics and government in a rigorous academic setting. This advanced course will allow students to engage in deeper analysis of our political system as well as acquire the critical thinking skills necessary for success in future accelerated social studies courses. Topics addressed in the course include: civic responsibility, the Constitution, and the workings of the federal, state, and local levels of our government. Students will be evaluated through various means including examinations, homework, projects, worksheets, and in-class activities. Quality points are awarded according to the honors scale.

Prerequisites

Semesters 2

10TH GRADE

This course will provide students with a knowledge and understanding of world history and culture from 1450 AD to the present. Topics in this course will be as follows: the Renaissance, the Reformation, Absolutism, the Enlightenment, the French Revolution, the Industrial Revolution, Imperialism, New Global Patterns, Asia, the Middle East, Africa, and Latin America.

Map assignments, worksheets, quizzes, homework, class participation, projects, reports, and examinations will be used to evaluate student progress.

Semesters 2

SS1206 (AP) Advanced Placement World History



This course will cover an intensive study of world history for selected students in grade 10. Extensive collateral reading will be required. There will be an emphasis on a critical and interpretive approach to the study of world history from the ancient times to the contemporary era. Admission will be based on previous demonstration of qualifications leading to faculty recommendation. Quality points are awarded according to the advanced placement scale. This course will replace World History.

Map assignments, document analysis, quizzes, homework, class participation, projects, reports, and examinations will be used to evaluate student progress. Taking the AP test in May is an important component of this course and is highly encouraged.

Prerequisites

10th Grade students must have 85% or higher in Honors Civics/Government, or 90% or higher in Civics and Government with 9th grade Social Studies teacher recommendation. PVAAS data will also be factored into the teacher recommendation process.

Periods Per Week 5

Units of Credit 1*

Semesters 2

(*with 1 extra quality point)

11TH GRADE

SS1209 United States History



This course will provide students with a study of U.S. History from the turn of the 19th Century to the present day. Possible topics in this course will be as follows: World War I, the Roaring Twenties, the Great Depression, and World War II, the Cold War, Social History, the Civil Rights Struggle, the Vietnam War Era, the Fall of Communism, and U.S. involvement in the Middle East. Map assignments, worksheets, quizzes, homework, class participation, projects, reports, and examinations will be used to evaluate student progress.

Periods Per Week 5

Units of Credit 1

Semesters 2

SS1229 (AP) Advanced Placement U.S. History



This course will cover an intensive study of American history for selected students in grade 11. It focuses on the development of historical thinking skills (chronological reasoning, comparing and contextualizing, crafting historical arguments using historical evidence, and interpreting historical narrative) and an understanding of content learning objectives organized around seven themes, such as American and National Identity, Politics and Power, and America in the World. Students will be expected to complete daily readings and develop a writing style that is demanded of a college history class. Admission will be based on previous demonstration of qualifications leading to faculty recommendation. Quality points are awarded according to the advanced placement scale.

Timed in-class writing, simulations, projects, daily quizzes, Socratic seminars, and intense examinations will be used to evaluate student progress. The overall course objectives are to take and pass the AP test in May and to prepare students to become more informed citizens.

Prerequisites

11th Grade students must have 85% or higher in Honors Civics/Government, and 90% or higher in World History. Alternatively, students should have 75% or higher in AP World History. All students must have a teacher recommendation from their 10th grade Social Studies teacher and be Advanced or Proficient on their 10th grade English Keystone. Additionally, students must be enrolled in AP Language and Composition or Academic English 11. PVAAS scores will be taken into consideration by the recommending teacher.

Periods Per Week 5

Units of Credit 1*

Semesters 2

(*with 1 extra quality point)

ELECTIVE SOCIAL STUDIES COURSES

(OPEN TO ALL 10TH-12TH GRADE STUDENTS)

SS1232 (AP) CHS Advanced Placement Psychology



Students will have the opportunity to take the AP exam and/or participate in the University of Pittsburgh College in the High School program. This is a college-level course offered at Thomas Jefferson High School in partnership with the University of Pittsburgh and students will have the opportunity to earn 3 college credits. The AP/CHS Psychology course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields (ex: psychological disorders, learning, sensation and perception, altered states of consciousness, etc) within psychology. They also learn about the ethics and methods psychologists use in their science and practice. The course will provide an overview of the diverse field of psychology, and an appreciation of the way that behavior and mental processes can be studied scientifically. Through a better understanding of human motivations and behaviors, we can better address the problems that plague society today.

Periods Per Week 5

Units of Credit 1*

Semesters 2

(*with 1 extra quality point)

SS1231 (AP) CHS Advanced Placement European History



This course will provide an intensive study of European history for selected seniors. Teacher recommendation is required. Students will have the opportunity to take the AP exam or participate in the Duquesne dual enrollment program. The Advanced Placement European History course is a college-level course offered at Thomas Jefferson High School in partnership with Duquesne University. The dual enrollment course is taught on-site at Thomas Jefferson High School. Students will have the opportunity to visit Duquesne University to participate in a college lecture, tour the campus, and earn 3 college credits. College credits are transferable to many other universities. Students must earn at least a "C" final average or better in order to be eligible for college credits. This survey course explores European history from 1450 to the present and introduces students to historical thinking skills: patterns of continuity and change over time, periodization, comparison, contextualization, historical argumentation, appropriate use of relevant historical evidence, interpretation, and synthesis. Students will be expected to conduct historical research, evaluate primary and secondary documents, and effectively synthesize information via oral and written communication.

Periods Per Week 5

Units of Credit 1*

Semesters 2

(*with 1 extra quality point)

SS1220 Economics



This course is designed to introduce students to the theories behind economic decision making and the role that economics plays in our everyday lives. This hands-on approach to economics includes the following topics: decision making, comparing the economies of the world, the determination of prices in a free enterprise economy, the role of government in the United States economy, the stock market, and consumer economics. Upon completion of this course students will possess an enhanced understanding of their role in our economy. This understanding will be gained through cooperative learning activities, simulations, economic exercises, and other forms of assessment.

Periods Per Week 5

Units of Credit .5

Semesters 1

SS1233 Law I



"Ignorance of the law is no excuse" is an often repeated phrase, but in reality, it is a binding principle that holds us all accountable for our daily acts. A little knowledge of the law can be quite useful and will help any student to know his/her legal rights and responsibilities as well as when legal counsel is needed. Topics include Introduction to the Legal Field, Criminal Law and Juvenile Justice, and Constitutional Law, and Criminal Procedure under the Constitution.

Worksheets, essays, quizzes, homework, class participation, projects, reports, and examinations will be used to evaluate student progress.

Periods Per Week 5

Units of Credit .5

Semesters 1

SS1237 Law II - Trial Advocacy



The Law II course will build upon the Law course that is currently offered at the high school. Students will take their knowledge of criminal, civil, and constitutional law, as well as learn about the rules of procedure and evidence, in order to participate in mock trial situations. Students will understand and apply evidentiary rules to a variety of situations that mimic real-world situations faced by trial attorneys. Students will learn how to conduct examinations and cross-examinations of witnesses, and use supporting evidence to build a case or defend their position. Students will practice and refine their analytical skills. Major Topics to be Covered: Courtroom Rules of Evidence, Trial Procedure, Crafting a legal argument, and participation in mock trial scenarios.

Prerequisites Law I

Periods Per Week 5

Units of Credit .5

Semesters 1

SS1235 Psychology



The primary focus of psychology is the scientific study of the human mind and behavior. Through a better understanding of human motivations and behaviors, we can better address the problems that plague society today. Possible topics for study will be as follows: learning theories, thought and memory, sensation, perception, altered states of consciousness, personality, psychological disorders, childhood and adolescence. Student progress will be evaluated using a variety of assessments.

Periods Per Week 5

Units of Credit .5

Semesters 1

SS1236 CHS Shaping the Modern World



Shaping the Modern World is a current political issues college in the high school course offered at Thomas Jefferson High School. Students will have the opportunity to earn 3 college credits through Duquesne University. This survey course will examine current and historical events in all regions of the world: Europe, Asia, Middle East, Africa, and South America. Global literacy, an understanding of how the world is interconnected, will be fostered through guest speakers, video conferences, and cultural experiences. A wide range of perspectives will be examined to encourage critical thinking and reading skills. Students will be expected to conduct historical research, evaluate primary and secondary sources, and effectively synthesize information via oral and written communication.

Periods Per Week 5

Units of Credit 1*

Semesters 2

(*with 1 extra quality point)

SS1234 Sociology



The primary function of the science of sociology is to study the rules that govern group living and the challenges facing society today. The tendency to form groups lies at the very foundation of human society. If we want to know why people act as they do, we must understand how the grouping process works. Most human behavior tends to be social in nature, so the subject matter ranges from the development of personality, to family interactions, to large group interactions made possible through the internet. Possible topics of study will be as follows: deviance and social control, social stratification, treatment of minority groups, the impact of society on personality, adolescence and the differences and similarities between cultures. Student progress will be evaluated using a variety of assessments.

Periods Per Week 5

Units of Credit .5

Semesters 1

SS1238 (AP) Advanced Placement US Government and Politics



The aim of this course is to provide students with a learning experience equivalent to that obtained in most college introductory political science courses. Students will not only be exposed to advanced material in the topic area but will also hone skills needed for college-level courses. Students cultivate their understanding of U.S. government and politics through an analysis of data and text-based sources as they explore topics like constitutionalism, liberty and order, civic participation in a representative democracy, competing policy-making interests, and methods of political analysis.

Throughout the course, a heavy emphasis is placed on the analysis and application of various founding documents and SCOTUS cases. Understanding of the material is assessed through examinations, writing assignments and projects. In preparation for class, students can expect to receive nightly reading assignments. The overall course objective is to take and pass the AP test in May and to prepare students to become more informed citizens.

It is recommended that students have at least a "C" average in all previous Social Studies courses. A general interest in the content is also strongly encouraged.

Periods Per Week Every other day (A or B) for the entire year

Units of Credit .5*

Semesters 1 (extended over the course of a year)

(*with 1 extra quality point)




BUSINESS INFORMATION AND TECHNOLOGY

The West Jefferson Hills School District's computer curriculum is based on the basic belief that ALL students should become equipped with the knowledge and technological skills necessary for being successful in post-secondary education and employment. Our software courses provide students with the knowledge and skills necessary to operate a personal computer and utilize the associated software. Our programming courses provide students with the knowledge and skills necessary to write, modify, and troubleshoot computer programs.

The West Jefferson Hills School District business education curriculum is based on two basic beliefs. The first is based on the belief that every student needs to develop skills necessary to become an educated consumer and citizen while strengthening their basic reading, writing, mathematical, and interpersonal skills. The second is that students should become equipped with the knowledge and technological skills necessary for being successful in post-secondary education and employment in a business-related field.

In order to carry out our philosophy, our courses teach the following basic skills:

1. Provide students with the knowledge and skills necessary to operate a personal computer and utilize the associated software.
2. Facilitate and encourage time management, leadership, and personal development.
3. Encourage intelligent consumer-related decisions.
4. Recognize the importance of entrepreneurship in today's global society.
5. Develop interpersonal and intrapersonal skills necessary to function effectively in life.
6. Promote the knowledge and skills necessary to obtain and maintain entry-level employment in business.
7. Foster a desire for continual learning, study, and growth in a business field.
8. Manage personal and business affairs independently.

Click  to see a short video description

BUSINESS AND IT COURSES

BU1367 Accounting I



This course is essential for students who plan to pursue business as a career. Accounting I provides a thorough background in the basic accounting procedures used to operate a business. Students who desire preparation for any business-related career will gain the knowledge necessary to process and interpret financial data. A required part of this course includes a simulation that is completed at the end of the course which includes all accounting work for a merchandising business for an entire month.

Grade Level: 10-11-12

Periods Per Week 5

Units of Credit 1

Semesters 2

BU1368 Accounting II



This course is for students with determined career objectives in business and/or the accounting profession. With an emphasis on corporate accounting, it is designed to complement and expand the student's ability to understand accounting procedures. Topics such as special journals, inventory control, methods of depreciation, accounting for notes payables/receivables, and accrued interest and expenses will be introduced.

Grade Level: 11-12

Prerequisites Accounting I with a final average grade of C or better.

Periods Per Week 5

Units of Credit 1

Semesters 2

BU1352 Accounting III



This course is offered to senior students who are seriously planning to pursue higher education with an Accounting or business degree. Topics covered will include departmentalized accounting, corporate accounting, cost accounting, as well as other accounting systems. Students will complete several accounting simulations throughout the year with an emphasis being placed on the ability to work independently.

Grade Level: 11-12

Prerequisites Accounting II with a final average grade of C or better.

Periods Per Week 5

Units of Credit 1

Semesters 2

BU1359 (AP) Advanced Placement Computer Science A



This course is designed to allow students the opportunity to learn a structured programming language. Class work will consist of written assignments, problem solving, examinations and programs written in Java programming language. An extra quality point is awarded for this course. Taking the AP Computer Science test in May is an important component of this course and is highly encouraged.

Grade Level: 10-11-12

Prerequisites Successful completion of C/C++ Programming for Engineering & Artificial Intelligence with a final average grade of C or better
AND Students selecting AP courses must have a recommendation from the subject department head.

Periods Per Week 5

Units of Credit 1

Semesters 2

BU1365 C/C++ Programming for Engineering & Artificial Intelligence



This course is designed to teach programming using structured technique and for any student interested in entering the engineering field, artificial intelligence, programming, robotics, and other related fields. Class work will consist of lab assignments, problem solving, programs and examinations written in C/C++ language. The course will use the Object-Oriented approach to programming and will introduce the students to engineering related problems and the C/C++ programming language.

This course is a prerequisite for the AP Computer Science course.

Grade Level: 9-10-11-12

Prerequisites

Successful completion of Python Programming with a C and/or teacher recommendation.

Periods Per Week 5

Units of Credit .5

Semesters 1

BU1360 CHS Incubator - Entrepreneurship



This college in high school course is designed to get students excited about becoming true entrepreneurs by giving them the opportunity to create and develop their own product or service. Real-world entrepreneurs and business experts serve as coaches and mentors guiding student teams through the process of ideation, market research, and business plan development. Students will be placed in teams and will learn about marketing, accounting, as well as the legal aspects of starting a business. They are given access to a network of professionals to further develop skills such as teamwork, problem solving, presentation, and communication for college and career readiness. Pitch Week helps to ignite the entrepreneurial spirit by putting student teams in front of actual investors to pitch their innovative idea and potentially win funding, turning their wishful thinking into a reality. Students will have the opportunity to earn 3 college credits through Seton Hill University.

This course is open to Juniors and Seniors. (Sophomores may be considered after juniors and seniors have been placed). Students must meet the criteria posted on the Incubator Canvas Page and will be chosen on a competitive basis. Registering for this class does not guarantee selection.

Grade Level: 10-11-12

Periods Per Week 5

Units of Credit 1

Semesters 2

BU1361 Cyber Security



This course will teach the students about the many different components of the computer as well as how data flows and is stored on the computer. Students will also learn the different computer operating systems (Windows, Linux, and IOS etc...). Students will also learn the different viruses that exist and ways to protect the computer from them. In the Forensic portion of the course, students will be able to trace and retrieve lost data and write up court case documents to back up their findings. Students will also compete in several nationwide contests of Capture the Flag - a computer hacking competition and Cyber Forensic competition as well.

Prerequisites

Must be in grades 10, 11, or 12. and successfully completed Python Programming with a C.

Periods Per Week 5

Units of Credit 1

Semesters 2

BU1369 Freshman Focus: Success at TJHS

Designed exclusively for 9th-grade students, this semester-long course provides a strong foundation for a successful high school experience by equipping students with essential skills for both academic and personal growth. Freshman Focus will ease the transition from middle school to high school by teaching critical soft skills such as time management, communication, problem-solving, and teamwork.

Additionally, students will gain an introduction to business concepts, serving as a valuable background for future business courses they may elect to take in high school or college. This course will also prepare students for future employment by developing the knowledge, skills, and aptitudes necessary to secure and succeed in their first job, manage personal finances, and become informed consumers. By the end of the course, students will have the tools to confidently navigate high school and plan for future success in both their academic and professional careers.

Periods Per Week 5

Units of Credit .5

Semesters 1

BU1363 Marketing



This course is designed to expose students to the exciting and multi-faceted world of marketing. Students will learn about branding, advertising, promotion, selling, product development, pricing, and marketing research. This class is the perfect head start for any student interested in majoring in business or becoming an entrepreneur.

Grade Level: 10-11-12

Periods Per Week 5

Units of Credit .5

Semesters 1

BU1370 CHS Personal Finance

This course will fulfill the financial literacy requirement for graduation.

This advanced, college-level course provides students with the knowledge and skills necessary to make informed financial decisions and build a secure financial future. Students have the option to earn college credit through Seton Hill University while gaining expertise in essential financial topics, including budgeting, saving, compensation, financial services, college planning, credit and debt management, insurance, housing, identity theft, investing, and taxes.

Through real-world scenarios, hands-on projects, mathematical computation, and critical thinking, students will enhance their financial literacy and decision-making abilities. This course challenges students to develop strategic financial plans, set long-term goals, and prepare for financial independence. Given its rigorous nature, students will be required to complete assignments and projects outside of class and work at an accelerated pace. CHS Personal Finance fulfills the Pennsylvania graduation requirement for the Class of 2028 and beyond.

Prerequisites Must be in grade 11 or 12

Periods Per Week 5

Units of Credit 1

Semesters 2

BU1356 Python Programming - Introduction to Programming



This is an introductory course for programming, which fulfills the computer requirement for graduation. Using problem-solving logic techniques, students will be able to code and troubleshoot a program, design a Python application, and develop programs for simple gaming. Python will emphasize Object-Oriented Programming design.

Grade Level: 9-10-11-12

Prerequisites Recommendation of strong math skills

Periods Per Week 5

Units of Credit .5

Semesters 1

BU1354 Retail Management



This course is for the serious business student who plans to pursue a career in entrepreneurship, management, marketing, or sales. The students will receive real-world experience through the daily operations and management of the school store, The Jaguar Den, which specialized in providing snacks and drinks to the students, as well as TJ apparel, accessories, and novelties to the entire West Jefferson Hills community. The students will be responsible for learning every aspect of operating the business. The student will be responsible for product design and development, purchasing merchandise, scheduling, inventory control, marketing, publicity, bookkeeping, website management, etc. Students may take this course more than once. This course will require students to operate the school store outside of regular school hours on some occasions.

Grade Level: 11-12

Prerequisites

A minimum of two business courses completed from the following list (Accounting I, Accounting II, Personal Finance, Incubator, Marketing, Financial Literacy). Enrollment for this course is capped at eight students. Students interested in enrolling in this class are required to complete a job application and will go through a typical interview process for employment.

Periods Per Week 5

Units of Credit 1

Semesters 2

BU1371 Financial Literacy

This course will fulfill the financial literacy requirement for graduation.

This course provides students with the essential skills needed to effectively manage their personal finances while building a secure financial future. Key topics include budgeting, saving, credit, investing, and taxes. Through real-world examples and hands-on projects, students will learn how to make informed financial decisions and set SMART financial goals. This course is designed to equip students with practical financial knowledge that will benefit them throughout their lives. Financial Literacy is a Pennsylvania graduation requirement for the Class of 2028 and beyond.

Grade Level: 11-12

Periods Per Week 5

Units of Credit .5

Semesters 1

BU1372 Honors Financial Literacy

This course will fulfill the financial literacy requirement for graduation.

This rigorous course provides students with essential money management skills to help them build a secure financial future. Key topics include financial services, budgeting, saving, credit, housing, insurance, college planning, investing, and taxes. Through real-world examples and hands-on projects, students will develop the ability to make informed financial decisions and set SMART financial goals. This honors-level course moves at an accelerated pace, requiring students to engage in complex readings, complete in-depth assignments, and apply critical thinking skills outside of the classroom. Students should be prepared for independent learning and a challenging curriculum designed to enhance financial literacy and personal financial responsibility. Financial Literacy is a Pennsylvania graduation requirement for the Class of 2028 and beyond.

Prerequisites

Must hold a 3.6 GPA or higher

Periods Per Week 5

Units of Credit .5

Semesters 1

BU1373 AP Computer Science Principles

AP Computer Science Principles (AP CSP) introduces students to the fundamental concepts of computing and technology, emphasizing how these fields impact society and the world around us. This course is designed to be engaging and accessible to all students, regardless of prior coding experience.

Students will explore a wide range of computing tools and skills, including data analysis, algorithms, programming, cybersecurity, and the societal impacts of computing innovations. Through hands-on projects, students will develop creative digital solutions, from simple games and apps to programs that inspire visual design and artistic expression.

The AP Exam for this course includes two project-based assessments and a written test, allowing students to demonstrate their understanding through applied problem-solving and computational thinking. Successful completion of this course fulfills the Technology Credit required for graduation.

Grade Level: 9-12

Prerequisites Completion of Algebra I

Periods Per Week 5

Units of Credit 1

Semesters 2

BU1374 Business Operations I

Business Operations I is designed for students interested in entrepreneurship, management, marketing, and sales. This hands-on course provides students with real-world business experience through the daily operations and management of The Coffee Tree Roasters, the school's student-run coffee shop.

Students will be actively involved in all aspects of running a business, including product design and development, purchasing inventory, scheduling, inventory control, marketing, publicity, bookkeeping, and website management. This immersive experience will help students develop essential problem-solving, leadership, and customer service skills, preparing them for future careers in business.

Students may take this course multiple times to gain advanced experience and leadership opportunities. Enrollment in this course requires students to complete a job application and participate in an interview process. Additionally, students must be available to operate the coffee shop outside of regular school hours as part of their responsibilities.

Grade Level: 10-11-12

Periods Per Week 5

Units of Credit .5

Semesters 1



TECHNOLOGY EDUCATION

Technology Education Courses

Technology is the application of tools, materials, processes and systems used to solve problems and extend human capabilities. Effective technology education combines knowledge of content, process, and skills. Technology education offers unique opportunities that apply numerous academic concepts through practical, hands-on application. Students who elect technology education courses will become technologically literate and be prepared to apply those skills in the technology driven world we live.

TE1861 Architecture



Architecture is a semester elective course for students in grades 9 thru 12. Students will study architectural design and animation using Autodesk Revit Architecture. Revit Architecture is building design software that helps you capture and analyze concepts, while maintaining your vision through design, documentation, and construction.

Periods Per Week 5

Units of Credit .5

Semesters 1

TE1857 Construction Technology



Construction Technology is a one semester elective for students in grades 9 thru 12. It is designed toward developing the necessary knowledge and skills needed to maintain one's home. Students will study current issues in construction, specifically in the areas of electric, plumbing, framing, and finish carpentry.

Periods Per Week 5

Units of Credit .5

Semesters 1

TE1867 Engineering



Engineering is a semester elective course for students in grades 9 thru 12 interested in 2D/3D design and 3D printing. Students will study mechanical design and simulation using AutoCad, Autodesk Inventor, and 3D printing/scanning software. This software enables you to produce more accurate models to design, visualize and simulate your ideas.

Periods Per Week 5

Units of Credit .5

Semesters 1

TE1869 Robotics/Drones



Robotics is a semester elective for students in grades 9 thru 12. This is an interdisciplinary course in which students combine science, technology, and math to design and create a robotic device that performs a specific function. The Robotics class is for creative students interested in working hands-on. Students will use tools, machines, and computers to develop the robots.

Periods Per Week 5

Units of Credit .5

Semesters 1

TE1866 Tech Lab



In grades 9-12 students will explore the growing field of manufacturing and technology. From the previous years at the middle school, the students will have an understanding of how to solve problems using the engineering design process, and they will apply that knowledge in this course. Students will learn how to use all equipment and tools in the Tech LAB. Students will learn CNC programming, Laser Engraving technology, uv printing, vinyl cutting/printing, and how to properly use tools and machines in the shop. By the end of this course, students will have the ability to solve technological problems using modern equipment and processes that will have a positive impact on their future careers. Students can take this course multiple times and build on previous years' knowledge to gain a deeper understanding of technologies.

Periods Per Week 5

Units of Credit .5

Semesters 1

TE1852 Theater Construction and Technology



Theater Production is a semester course for students in grades 9-12. During this course students will have the opportunity to learn the design and build process of a theater production. Students will work hands-on to layout and create and build set pieces, use and design lighting to highlight areas and create scenes. They will also be introduced to the basics of the sound board. Students can take this course multiple times and build on previous years' knowledge to gain a deeper understanding of technologies.

Periods Per Week 5

Units of Credit .5

Semesters 1

TE1870 Introduction to TJTV



Thomas Jefferson Television is a semester elective course for students in grades 9 through 12. It is a hands-on course set around the creation of daily television announcements and productions. Students will be involved in announcing, scripting, producing and interviewing, directing, shooting and editing.

Periods Per Week 5

Units of Credit .5

Semesters 1

TE1871 Advanced TJTV



Thomas Jefferson Television is a semester elective course for students in grades 10 through 12. It is a hands-on course set around the creation of daily television announcements and productions. Students will be involved in announcing, scripting, producing and interviewing, directing, shooting and editing. Productions will require students to attend and report on various activities after school hours. Students can take this course multiple times and build on previous years' knowledge to gain a deeper understanding of technologies.

Periods Per Week 5

Units of Credit .5

Semesters 1

TE1853 Commercial Design



The Commercial Design class bridges the gap between the Art & Technology classes. In this semester-long course, students will implement design in manufacturing and create images and graphics used for various commercial applications. These designs will apply to sports, school, community and local business. This class will ONLY be offered to grades 11 and 12 and students MUST take the Graphic Design and/or Tech Lab courses prior to enrollment. *Students must be selected for enrollment based on the above criteria by Mr. Betler.

Periods Per Week 5

Units of Credit .5

Semesters 1



WORLD LANGUAGE

World Language Courses

[Click here for an overview video.](#)

The West Jefferson Hills World Language Department recognizes the following beliefs in our curriculum that reflect the ever changing world. They include:

- Given the necessary level of support and opportunity, all students can learn a language.
- Learning a language requires active participation.
- Language instruction must be relevant, student centered, and process driven to accommodate the needs of a changing world.
- Learning is a collaborative responsibility among students, educators, parents and community.

The World Language Department will encourage students to become motivated enthusiastic learners in all phases of instruction. This will be accomplished by incorporating:

- A communicative curriculum.
- Contextualized learning using engaging, culturally relevant, comprehensible stories.
- Learner centered instruction.
- Cooperative learning tasks to increase students' proficiency in reading, listening, speaking, and writing.
- An integrated participatory approach to culture.
- Comprehensible Input Based Lessons

Click  to see a short video description

FRENCH COURSES

WL1508 French I



French I is an introductory course designed for true beginners - taking students from novice-low to novice-mid and beyond as identified in the foreign language proficiency guidelines established by the American Council on the Teaching of Foreign Languages (ACTFL). Students will be introduced to the language through stories that use high frequency French vocabulary. Students will practice listening, reading, writing, and speaking with authentic texts, video, and audio resources using the three modes of communication: interpersonal speaking and writing, presentational speaking and writing, and interpretive listening and reading. Students will read about and watch videos highlighting the Francophone world noticing cultural similarities and differences.

Periods Per Week 5

Units of Credit 1

Semesters 2

WL1510 French II



French II builds cumulatively on the knowledge learned in French I. Students continue to develop their familiarity of the language and culture through a series of short stories carefully written using the top high-frequency words in the French language. Students will practice listening, reading, writing, and speaking with authentic texts, video, and audio resources using the three modes of communication: interpersonal speaking and writing, presentational speaking and writing, and interpretive listening and reading. Students are expected to move from a proficiency level of novice-mid to novice-high and beyond as identified in the foreign language proficiency guidelines established by ACTFL.

Prerequisites

"C" average or higher in French I, and a recommended proficiency level of at least Novice-Mid.

Periods Per Week 5

Units of Credit 1

Semesters 2

WL1512 French III



French III builds cumulatively on the knowledge learned in French I and II. Students continue their language study through a series of three short stories and one longer story, each carefully written using a combination of high-frequency, grammar-rich words in the French language and phrases and idioms related to the unit's theme. Students will practice listening, reading, writing, and speaking with authentic texts, video, and audio resources using the three modes of communication: interpersonal speaking and writing, presentational speaking and writing, and interpretive listening and reading. Students are expected to move from a proficiency level of novice-high to intermediate-low and beyond as identified in the foreign language proficiency guidelines established by ACTFL.

Prerequisites

"C" average or higher in French II, and a recommended proficiency level of at least Novice-High

Periods Per Week 5

Units of Credit 1

Semesters 2

WL1513 CHS French III



CHS French III is a rigorous college in the high school course that prepares students for CHS French IV and AP/CHS French. Students continue their language study through more complex stories which include varying levels of comprehension activities that provide repeated exposure to targeted structures in novel ways. Alternative versions of some stories offer new perspectives aimed at highlighting different verb forms or tenses. Short grammar notes in context appear after some stories with accompanying structured input activities that draw students' attention to recognizing language patterns in personalized, meaningful ways. Students will practice listening, reading, writing, and speaking with authentic texts, video, and audio resources using the three modes of communication: interpersonal speaking and writing, presentational speaking and writing, and interpretive listening and reading. Students are expected to move from a proficiency level of intermediate-low to intermediate-mid and beyond as identified in the foreign language proficiency guidelines established by ACTFL. Students have the opportunity to earn 3 college credits from Seton Hill University.

Prerequisites

"B" average or higher in French II, and a recommended proficiency level of at least Intermediate-Low with teacher recommendation.

Periods Per Week 5

Units of Credit 1

Semesters 2

WL1515 CHS French IV



CHS French IV is a rigorous college in the high school course that prepares students for AP/CHS French. Students continue their study of French picking up where they left off in CHS French III or French III. This course will focus on interpersonal speaking skills, presentational writing skills, and interpretive skills of listening, reading, and viewing (charts and graphs). Students are expected to maintain a proficiency level of intermediate,-mid or beyond as identified in the foreign language proficiency guidelines established by ACTFL. Students have the opportunity to earn 3 college credits from Seton Hill University.

Prerequisites

"A" average in French III and a recommended proficiency level of at least Intermediate-Low with teacher recommendation.

OR

"B" average or higher in CHS French III and a proficiency level of at least Intermediate-Low with teacher recommendation.

Periods Per Week 5

Units of Credit 1

Semesters 2

WL1514 (AP) CHS Advanced Placement French



AP/CHS French is an advanced placement college in the high school course that prepares students for the AP French Language and Culture Exam. Students will practice listening, reading, writing and speaking with authentic texts, video, and audio resources using the three modes of communication: interpersonal speaking and writing, presentational speaking and writing, and interpretive listening and reading. Students are expected to maintain a proficiency level of intermediate,-mid or beyond as identified in the foreign language proficiency guidelines established by ACTFL. Students have the opportunity to earn 3 college credits through Seton Hill University.

Prerequisites

"B" average or higher in CHS French IV and a recommended proficiency level of at least Intermediate-Mid with teacher recommendation.

Periods Per Week 5

Units of Credit 1

Semesters 2

WL1527 French Language Lab

Students are provided with enrichment opportunities to grow their communication skills in the target language through structured interpersonal interactions, discussions, and topical investigations and presentations. The principal objective of this course is to elevate all elements of language ability with an emphasis on creating with the language and processing speed. This half-credit offering is available to students enrolled in CHS French III, CHS French IV, and (AP) Advanced Placement French. The course is not required to be taken alongside those courses but is highly recommended. Students in all three levels will collaborate and sharpen their language skills in the same classroom.

Prerequisites

Enrolled in CHS French III, CHS French IV, or (AP) Advanced Placement French

Periods Per Week 2-3

Units of Credit .5

Semesters 2

SPANISH COURSES

WL1516 Spanish I



Spanish I is an introductory course designed for true beginners - taking students from novice-low to novice-mid and beyond as identified in the foreign language proficiency guidelines established by the American Council on the Teaching of Foreign Languages (ACTFL). Students will be introduced to the language through stories that use high frequency Spanish vocabulary. Students will practice listening, reading, writing, and speaking with authentic texts, video, and audio resources using the three modes of communication: interpersonal speaking and writing, presentational speaking and writing, and interpretive listening and reading. Students will read about and watch videos highlighting the Spanish-speaking world noticing cultural similarities and differences.

Periods Per Week 5

Units of Credit 1

Semesters 2

WL1518 Spanish II



Spanish II builds cumulatively on the knowledge learned in Spanish I. Students continue to develop their familiarity of the language and culture through a series of short stories carefully written using the top high-frequency words in the Spanish language. Students will practice listening, reading, writing, and speaking with authentic texts, video, and audio resources using the three modes of communication: interpersonal speaking and writing, presentational speaking and writing, and interpretive listening and reading. Students are expected to move from a proficiency level of novice-mid to novice-high and beyond as identified in the foreign language proficiency guidelines established by ACTFL.

Prerequisites

"C" average or higher in Spanish I, and a recommended proficiency level of at least Novice-Mid.

Periods Per Week 5

Units of Credit 1

Semesters 2

WL1520 Spanish III



Spanish III builds cumulatively on the knowledge learned in Spanish I and II. Students continue their language study through a series of three short stories and one longer story, each carefully written using a combination of high-frequency, grammar-rich words in the Spanish language and phrases and idioms related to the unit's theme. Students will practice listening, reading, writing, and speaking with authentic texts, video, and audio resources using the three modes of communication: interpersonal speaking and writing, presentational speaking and writing, and interpretive listening and reading. Students are expected to move from a proficiency level of novice-high to intermediate-low and beyond as identified in the foreign language proficiency guidelines established by ACTFL.

Prerequisites

"C" average or higher in Spanish II, and a recommended proficiency level of at least Novice-High

Periods Per Week 5

Units of Credit 1

Semesters 2

WL1521 CHS Spanish III



CHS Spanish III is a rigorous college in the high school course that prepares students for CHS Spanish IV and AP/CHS Spanish. Students continue their language study through more complex stories which include varying levels of comprehension activities that provide repeated exposure to targeted structures in novel ways. Alternative versions of some stories offer new perspectives aimed at highlighting different verb forms or tenses. Short grammar notes in context appear after some stories with accompanying structured input activities that draw students' attention to recognizing language patterns in personalized, meaningful ways. Students will practice listening, reading, writing, and speaking with authentic texts, video, and audio resources using the three modes of communication: interpersonal speaking and writing, presentational speaking and writing, and interpretive listening and reading. Students are expected to move from a proficiency level of intermediate-low to intermediate-mid and beyond as identified in the foreign language proficiency guidelines established by ACTFL. Students have the opportunity to earn 3 college credits from Seton Hill University.

Prerequisites

"B" Average or higher in Spanish II, teacher recommendation, and a recommended proficiency level of at least Intermediate-Low

Periods Per Week 5

Units of Credit 1

Semesters 2

WL1525 CHS Spanish IV



CHS Spanish IV is a rigorous college in the high school course that prepares students for AP/CHS Spanish. Students continue their study of Spanish picking up where they left off in CHS Spanish III or Spanish III. This course will focus on interpersonal speaking skills, presentational writing skills, and interpretive skills of listening, reading, and viewing (charts and graphs). Students are expected to maintain a proficiency level of intermediate,-mid or beyond as identified in the foreign language proficiency guidelines established by ACTFL. Students have the opportunity to earn 3 college credits from Seton Hill University.

Prerequisites

"A" average in Spanish III and a recommended proficiency level of at least Intermediate-Low with teacher recommendation.
OR
"B" average or higher in CHS Spanish III and a proficiency level of at least Intermediate-Low with teacher recommendation.

Periods Per Week 5

Units of Credit 1

Semesters 2

WL1522 (AP) CHS Advanced Placement Spanish



AP/CHS Spanish is a rigorous, advanced placement college in the high school course that prepares students for the AP Spanish Language and Culture Exam. Students will practice listening, reading, writing, and speaking with authentic texts, video, and audio resources using the three modes of communication: interpersonal speaking and writing, presentational speaking and writing, and interpretive listening and reading. Students are expected to maintain a proficiency level of intermediate, -mid or beyond as identified in the foreign language proficiency guidelines established by ACTFL. Students have the opportunity to earn 3 college credits through Seton Hill University.

Prerequisites

"B" average or higher in CHS Spanish IV and a recommended proficiency level of at least Intermediate-Mid with teacher recommendation.

Periods Per Week 5

Units of Credit 1

Semesters 2

WL1528 Spanish Language Lab

Students are provided with enrichment opportunities to grow their communication skills in the target language through structured interpersonal interactions, discussions, and topical investigations and presentations. The principal objective of this course is to elevate all elements of language ability with an emphasis on creating with the language and processing speed. This half-credit offering is available to students enrolled in CHS Spanish III, CHS Spanish IV, and (AP) Advanced Placement Spanish. The course is not required to be taken alongside those courses but is highly recommended. Students in all three levels will collaborate and sharpen their language skills in the same classroom.

Prerequisites

Enrolled in CHS Spanish III, CHS Spanish IV, or (AP) Advanced Placement Spanish

Periods Per Week 2-3

Units of Credit .5

Semesters 2

WL1524 Hispanic Culture and Spanish Conversation



This course delves into both cultural and historical concepts from various Spanish-speaking countries that relate to the modern world. Additionally, students will engage in interpersonal speaking with the goal of being able to hold a spontaneous conversation about simple topics as well as be able to travel abroad.

Prerequisites

Spanish II

Periods Per Week 2-3

Units of Credit .5

Semesters 2



FAMILY CONSUMER SCIENCE

Family and Consumer Sciences has its focus on preparing individuals to become independent, to assume family roles, to contribute to the good of the community and society, to balance work and family, and to transfer personal skills to the workplace.

Click  to see a short video description

FC1804 Adult Living



This course prepares students to live as responsible, independent individuals. Students will gain knowledge of living on their own and how to survive in the world of adulthood. Topics include: values, decision making, skills, goals, self-awareness, communication skills, families, and the individual's roles and responsibilities within the family and community, money management, and basic kitchen skills. Emphasis will be placed on the student becoming an independent individual.

Prerequisites Must be in grade 11 or 12

Periods Per Week 5

Units of Credit .5

Semesters 1

FC1802 Child Development Theory



This course is required for students who are interested in taking Nursery School. Students are provided with an understanding of the aspects of human growth and development. The magic world of the developing child from conception to age four is covered in this course. Parenting skills are developed as positive guidance techniques and child related issues are studied. To prepare the student for Nursery School, instruction is given regarding standards involved with childcare, employment skills needed to work with young children, how to maintain a healthy environment for children, developmentally appropriate practices, learning activities and observation techniques in working with groups of young children are included.

Prerequisites For grades 10, 11, or 12

Periods Per Week 5

Units of Credit .5

Semesters 1

FC1803 Nursery School



This course is available to seniors only or to Juniors who have taken and passed Child Development I-Theory. Theories of development are covered in the first four weeks. Also, during this time, learning how to operate a preschool is studied. For the next twelve weeks, children, ages two and a half to four, will come to the high school four days a week. The students will plan, prepare, implement and assess activities for the children. This course is good for anyone interested in working with children as a career.

Students may elect to take more than 1 semester, however priority will be given to those who have not yet had the opportunity.

Prerequisites

Successful Completion of Child Development Theory

The following three PA Child Protective Services Law (CPSL) Clearances:

- Act 34 Criminal History Record Check
- Act 151 Child Abuse History Clearance
- Act 114 FBI Fingerprint Background Check

Periods Per Week 5

Units of Credit .5

Semesters 1

FC1811 Fabric, Fashion, and Design I



This is a one semester course that is offered to students in their 9th, 10th, 11th, or 12th year. This course is designed for the beginner sewer. Basic seam finishes and beginning textiles will be covered. The student will be provided with the opportunity to apply principles of art and design to fashion, while learning the basic techniques of clothing construction. The student must complete three projects. All materials and supplies are to be provided by the student.

Periods Per Week 5

Units of Credit .5

Semesters 1

FC1812 Advanced Fabric, Fashion, and Design II



This course is offered to students in 10th, 11th, or 12th grade who have successfully completed Fabric Fashion and Design Level I. The student will learn and apply more difficult construction and design skills, how to use the serger, work with more difficult fabrics, and other more advanced sewing technology. Each time the student must complete three projects based on his/her skill level. All materials and supplies are to be provided by the student.

Prerequisites For grades 10, 11, 12 who have passed Level I

Periods Per Week 5

Units of Credit .5

Semesters 1

C1813 Advanced Fabric, Fashion, and Design III



This course is offered to students in 10th, 11th, or 12th grade who have successfully completed Fabric Fashion and Design Level I and II. The student will learn and apply more difficult construction and design skills, how to use the serger, work with more difficult fabrics, and other more advanced sewing technology. A student may take this course once. Students enrolled will complete projects that are more advanced than those on Level II. Each time the student must complete three projects based on his/her skill level. All materials and supplies are to be provided by the student.

Prerequisites For grades 10, 11, 12 who have passed Level I and/or II

Periods Per Week 5

Units of Credit .5

Semesters 1

FC1805 Foods and Nutrition



It's not just a cooking and eating course!! This course begins with the study of nutrition and diet analysis, allowing the student to make decisions to improve and maintain a healthy lifestyle. Food purchasing, label reading, and setting up a kitchen are included. This is followed by planning and preparing foods in a group. Throughout the semester, wise use of time, energy, money and equipment is emphasized while learning to apply healthy eating styles.

Prerequisites Must be in grades 10, 11, or 12

Periods Per Week 5

Units of Credit .5

Semesters 1

FC1806 Interior Design



The Interior Design course emphasizes the use of art principles in decorating a home. Students learn housing styles, floor plans, and furniture style and arrangement. These principles are applied to a major project. Creativity through decorating for less projects finishes out the course. Students must supply all of their own materials.

Prerequisites Must be in grades 10, 11, or 12

Periods Per Week 5

Units of Credit .5

Semesters 1

FC1801 Introduction to Family and Consumer Science



It's not just cooking and sewing! This is a course for 9th graders only. It is designed to introduce the student to semester courses offered in their 10th, 11th, or 12th grade year. Learning to make healthy choices in lifestyle and nutrition, to be a contributing member of family and community, to make smarter consumer decisions, and career exploration are the major areas covered. Hands-on projects are part of the course. The student must supply all materials for the projects.

Prerequisites 9th Grade Only

Periods Per Week 5

Units of Credit .5

Semesters 1



FINE ARTS

Fine Arts Courses

Thomas Jefferson High School intends to make the values of the fine arts visible to our students. The fine arts, involving music and the visual arts, helps prepare students for further education in careers involving creativity, and it brings exhilaration to the whole learning process. Students become interested in learning, adding new dimensions to what they already know, enhancing knowledge through creative interpretation. Through active participation in various forms of self-expression, the student is continuously challenged to develop intelligent behavior and social skills that affect their overall lives in society and culture. Students learn to adapt and respect others' ways of thinking, working, and expression. Significant opportunities are provided for students to progressively broaden views of the world. Fine arts education enables students to develop the self-esteem, individuality and motivation necessary for success in all facets of life. The pleasure and meaning of learning becomes real, tangible and powerful through the fine arts.

ARTS & CRAFTS COURSES

AR1910 Art I



The Art I course is designed for the beginning art student, especially those wishing to pursue upper level art courses. Students are introduced to basic art media and techniques with an emphasis on the Elements of Art, Principles, Design and Composition.

Periods Per Week 5

Units of Credit .5

Semesters 1

AR 1916 Art II



Art II is an intermediate level art class designed for the motivated art student wishing to expand on skills and knowledge introduced in Art I. The course continues to build on the use of Elements of Art, Principles of Design and Composition through a diverse breadth of artmaking processes and materials.

Prerequisites

Art I
See teacher for special circumstances

Periods Per Week 5

Units of Credit .5

Semesters 1

AR1918 (AP) Advanced Placement Art: Drawing Portfolio



AP Drawing is a year long, advanced placement college-level drawing course for the serious art student. Students partake in an inquiry based study of art materials, processes and ideas done over time, known as a sustained investigation. This inquiry leads students to ultimately create a portfolio of no less than 15 works, intended for submission to the college board as part of the AP Art Exam. Students passing the exam may earn college credit. Hands-on studio experiences, writing activities and talking about art, are integral parts of the course.

Prerequisites

Studio Art I and Studio Art II
See teacher for special circumstances
OFFERED TO STUDENTS IN BOTH 11th & 12th GRADES ONLY

Periods Per Week 5

Units of Credit 1

Semesters 2

AR1902 Photoshop & Design



The course will cover a whirlwind of basic design techniques providing proficiency in both hand and computer generated imagery as well as Product Advertising. Elements of line, type, shape and texture will embrace principles of balance, contrast, unity, color, and value. Throughout the course, students will learn to use the Adobe Photoshop program. This course is a definitive college/career option for many students and utilizes the school's classroom technology resources. THIS COURSE IS A NECESSARY PREREQUISITE CHOICE FOR THOSE WANTING TO TAKE THE COMMERCIAL DESIGN CLASS.

Prerequisites

MUST be in grade 10, 11, or 12

Periods Per Week 5

Units of Credit .5

Semesters 1

AR1903 Ceramics Studio I



The Ceramics course is for students who have an interest in working with clay. Hand-forming techniques such as pinch pots, coil pots and slab construction will be explored initially, after which the student will attempt to acquire some proficiency on the potter's wheel. Clay modeling and sculpture will also be explored along with glazing and decorating techniques. This course is designed to be taken once as a prerequisite for Advanced Ceramics.

Periods Per Week 5

Units of Credit .5

Semesters 1

AR1922 Advanced Ceramics-Wheel Throwing

This class builds upon WHEEL THROWING skills learned in Ceramics I and further introduces more advanced techniques, surface treatments and methods of firing. As well, an emphasis is placed on developing students' own voice and style through a focus on themes, exploration and creativity.

Prerequisites

To enroll, students MUST have taken and passed Ceramics I with a "B" or higher grade and be in grades 10-12 ONLY.

Periods Per Week 5

Units of Credit .5

Semesters 1

AR1923 Advanced Ceramics-Hand Building

This class builds upon HAND BUILDING skills learned in Ceramics I and further introduces more advanced techniques, surface treatments and methods of firing. As well, an emphasis is placed on developing students' own voice and style through a focus on themes, exploration and creativity.

Prerequisites

To enroll, students MUST have taken and passed Ceramics I with a "B" or higher grade and be in grades 10-12 ONLY.

Periods Per Week 5

Units of Credit .5

Semesters 1

AR1914 Creative Recording Studio Media



Introductory course for recording and composition taught to students at the 11th & 12th grade levels. The emphasis is to harness the creative process through performance, documentation and technical know-how. Students will be able to set up a recording session (both in-studio and remote locations) to capture a variety of sonic arrangements, ensembles, voices and solo instruments. Basic tracking, editing, overdubbing and mixing will be covered. They will learn about the correct uses of different microphones, preamps and amplifiers. This course will introduce students to recording platforms like Pro-Tools and other similar DAW software.

Prerequisites

GRADES 11 & 12 ONLY. It is strongly recommended that students with musical interests or backgrounds are considered. This course may be taken more than once by dedicated students and MUST have teacher approval prior to scheduling.

Periods Per Week 5

Units of Credit .5

Semesters 1

AR1901 Crafts & Mixed Media Arts



This course is open to students who wish to work with a variety of arts and crafts techniques and materials. While not considered advanced, the course provides expectations to challenge beyond basic requirements. Some materials and processes we may work with are College, Textiles, Metal, Polymer Clay, Printmaking and artworks from Recycled Materials. This class along with Art I serves as a strong foundation for the student who elects more advanced classes in the future.

Periods Per Week 5

Units of Credit .5

Semesters 1

AR1908 Photography/Video Production



This course is intended to be a basic guide to photography and video production. Photography starts at the beginning and assumes the student has no prior understanding of the subject. Photography follows all the necessary steps from the beginning of picture-taking through digital manipulation and presentation. Students will also learn basic video production, editing and titling.

Periods Per Week 5

Units of Credit .5

Semesters 1

AR1917 Sculpture



Sculpture introduces students to three dimensional art concepts, mediums and methods. Course projects and materials are mostly sculptural in nature. However, some work will require 2-D drawing representing three dimensional ideas.

Periods Per Week 5

Units of Credit .5

Semesters 1

AR1921 Commercial Design Art



The Commercial Design class bridges the gap between the Art & Technology classes. In this semester-long course, students will implement design in manufacturing and create images and graphics used for various commercial applications. These designs will apply to sports, school, community and local business. This class will ONLY be offered to grades 11 and 12 and students MUST take the Graphic Design courses prior to enrollment.

*Students must be selected for enrollment based on the above criteria by Mr. Salopek

Periods Per Week 5

Units of Credit .5

Semesters 1

MUSIC

MU1954 Music Theory and History



This course is offered as an elective for one semester for students in grades 10, 11, and 12. The purpose of the course is to develop an understanding of the fundamentals of music theory and history. Ear training, part writing, analysis, form, and musical time periods are all covered. This class is intended to prepare a student for study in the field of music, and a fundamental knowledge of the elements of music is a prerequisite for the course. Students applying for this course must meet with the music staff to determine whether their background is adequate for successful completion of the course.

Prerequisites

Open to 10th, 11th, and 12th Graders, AND Music teacher recommendation is required.

Periods Per Week 5

Units of Credit .5

Semesters 1

MU1955 Music Theory II



This course is offered as an elective for one semester for students in grades 10, 11, and 12. The purpose of the course is to develop an understanding of the fundamentals of music theory and history. Ear training, part writing, analysis, form, and musical time periods are all covered. This class is intended to prepare a student for study in the field of music, and a fundamental knowledge of the elements of music is a prerequisite for the course. Students applying for this course must meet with the music staff to determine whether their background is adequate for successful completion of the course.

Prerequisites

Successful completion of Music Theory and History, AND music teacher recommendation.

Periods Per Week 5

Units of Credit .5

Semesters 1

INSTRUMENTAL MUSIC PROGRAM

The Instrumental Music Program is a one (1) year course. Students scheduling for Band are to register for Marching Band for the first semester, then either Marching/Concert Band or Marching/Symphonic Band for the second semester. Students must participate in both semesters to be part of the Thomas Jefferson Instrumental Music Program. Junior High Band students must fulfill all the requirements of the Pleasant Hills Middle School Instrumental Program to be eligible to participate in the Thomas Jefferson High Instrumental Music Program. Students not participating in the West Jefferson Hills School District Instrumental Music Program must successfully pass the audition requirements to be eligible to enter or re-enter the Thomas Jefferson High School Instrumental Music Program. Students will also be eligible to participate in the Pennsylvania Music Educator Association (PMEA) sanctioned events (Honors Band, District Band, Regional Band, All-State Band, District Jazz Bands All State Jazz Band, and Band Adjudication Festivals). All criteria and standards are given below for each performing group. Students not enrolled in the Thomas Jefferson Instrumental Music program will not be eligible to participate in a PMEA sanction event.

MARCHING BAND

The Thomas Jefferson High School Marching Band consists of all woodwind, brass, and percussion from the Concert and Symphonic Bands, color guard, and majorette members in grades 9-12. Registration for Marching Band begins in the spring. Recruitment activities include a student presentation at Pleasant Hills Middle School, a director's presentation at the middle school, and an informational parent meeting in April.

Each student will receive a handbook that contains all the rules and regulations for marching band, including attendance requirements and a schedule of rehearsals and performances. The Marching Band performs at all varsity football games, community events, and at parades and festivals throughout the region.

The Thomas Jefferson High School Marching Band is an educational arts program dedicated to providing the youth of our high school and community with the means to develop life skills, musical skills, performance skills, build character and foster teamwork while cultivating the talents of tomorrow's leaders.

MU1941 Honors Symphonic/Marching Band



The Honors Symphonic/ Marching Band is created for the advanced woodwind, brass, and percussion students in grades 10, 11 and 12. The objective of this band is to strive for the highest possible achievement through the performance of advanced band literature written for the modern band as well as orchestral transcriptions. Students are expected to have a highly developed sense of tone, intonation, rhythm, harmony and articulation. Students will also study advanced theoretical and technical concepts appropriate to their individual instrument. The Honors Symphonic/ Marching Band students will participate in both the symphonic and marching band settings. Student's participation in school performance as well as outside of school performances are all required and mandatory. In addition, all after-school rehearsals may also be required. Musicians wanting to participate in PMEA or MENC Honors Festivals must be enrolled in the class. The Honors Symphonic/Marching Band pace is accelerated and evaluated at higher standards, therefore students will be awarded quality points under the honors scale.

Periods Per Week	Units of Credit	Semesters
5	1	2

MU1951 Marching/Concert Band



The Marching/Concert Band is open to students in grades 9, 10, 11 & 12 enrolled in the Thomas Jefferson Music Program having completed instrumental band through the eighth grade or its equivalent. The objective of this Band is to strive for the highest possible musical achievement through the performance of intermediate to advance band literature. The band will be introduced to and develop new musical techniques through a wide range of musical styles and composers by way of studying a variety of classical band works, orchestral transcriptions, marches, and popular music. The Marching/Concert Band typically performs two concerts a year and at Graduation and commencement ceremonies. Other festivals and community performances may be added from year to year at the discretion of the director. The Marching/Concert Band begins to rehearse at the conclusion of Marching Band season.

Periods Per Week 5

Units of Credit 1

Semesters 2

MU1942 Jazz Ensemble



The Jazz Ensembles are groups of approximately 20 instrumentalists who are chosen by audition in the spring of each school year.

Students are placed in either Jazz Ensemble I or II based on their performance and knowledge in the jazz idiom. There are two band that meet during 5th and 6th period (Jazz I meets period 6 and Jazz II meets period 5) and after school at the conclusion of the Marching Band season. Advanced arrangements in the various jazz styles are studied and played. An introduction to improvisation and solo playing is also provided. The bands perform at several festivals, concerts, and community events throughout the area. Students are made aware of the attendance requirements upon auditioning for the ensembles. Students wishing to participate in the Jazz Ensembles must also be enrolled in the Symphonic/Marching Band or Symphonic/Concert Band for the academic school year.

Periods Per Week 5

Units of Credit 1

Semesters 2

MU1959 Strings Ensemble



The String Ensemble is a group made of musicians who play primarily but are not restricted to stringed instruments. (i.e. violin, viola, cello, bass, guitar, etc, etc.). The goal of this course is to enrich the skills and awareness of each student, to offer a venue and ensemble for instrumentalists of string instruments or instruments that don't fit within the conventional repertoire and to offer rewarding musical experiences within the musical aesthetic. The ensemble meets for rehearsal during period 4 each day and after school on predetermined, coordinated and selected days in the band room. In this course of study the students are exposed to and study an assortment of musical arrangements in many distinct styles from classical, folk, rock, Latin to jazz and bluegrass. Also in this, students are introduced to the musical act of improvisation and its application to modern and historic music. The Ensemble performs several times throughout the year including holiday performances and an annual "String Collective" towards the end of the year. Upon inquiring about participation with the instructor, students are made aware of the rehearsal and performance commitments for that given year. Students wishing to be a part of the String Ensemble are not required to be a part of the band or chorus program though we do accept members who are.

Periods Per Week 5

Units of Credit 1

Semesters 2

MU1949 Percussion Ensemble



This year long one credit class provides percussion students with experience in the percussion idioms including snare, multiple percussion, timpani, mallet instruments (glockenspiel, xylophone, and marimba) and auxiliary percussion usage. Students will study music theory concepts, and will learn to apply those concepts to their various repertoires. Students will also study the fundamental rudiments of percussion and apply those rudiments to their various repertoires. This is accomplished through the guidelines of the National and State Standards of Music Education. This class serves as the percussion section to the Marching Band, Concert Bands, Jazz Bands, as well as a self-supporting performance Ensemble. Activities include school and community concerts, all marching band activities such as football games and parades. All students enrolled in this course will be members of the Thomas Jefferson Instrumental Music Department and will be members of the Concert and Marching Bands. All Percussionists must take this course.

Periods Per Week 5

Units of Credit 1

Semesters 2

MU1930 Varsity Choir



The Thomas Jefferson High School Varsity Choir is open to any student, grades 9-12, who expresses a sincere desire to sing. Students will learn to read music and will learn good singing techniques. Also, vocal technique and sight-reading skills are a part of each rehearsal.

They will prepare and present two major concerts a year. Attendance at these concerts is mandatory. In addition, other performances are held in the community throughout the school year. Students demonstrating exceptional abilities in Varsity Choir may audition for PMEA District Chorus in the fall.

Periods Per Week 5

Units of Credit 1

Semesters 2

MU1953 Concert Choir



The Thomas Jefferson High School Concert Choir is an auditioned-entry Choir. Students who are very serious about singing have the opportunity to prepare and audition for this advanced Choir. The Concert Choir is open to all students in grades 10- 12. Vocal technique and sight-reading skills are a part of each rehearsal. Students in Concert Choir are expected to be able to sing their part independently and with good vocal technique and musicianship. They will prepare and present two major concerts a year. Attendance at these concerts is mandatory. In addition, other performances are held in the community throughout the school year. Students in Concert Choir are encouraged to audition for PMEA District Chorus in the fall.

Periods Per Week 5

Units of Credit 1

Semesters 2

MU1940 A Cappella Choir



The A Cappella Choir is a year-long course open to students in Grades 9 – 12. These students must audition and be placed into this ensemble. They perform at all concerts, as well as school functions and community events. This group primarily performs contemporary a cappella music. Maximum class size: 24 students.

Periods Per Week 5

Units of Credit 1

Semesters 2

MU1932 Show Choir



Show Choir is a performance-based class, where students learn to prepare and perform popular music. Students learn how to add choreography to songs, as well as text interpretation, facial and body expressions, and many performance skills. Show Choir performs at all TJHS concerts, as well as in the community at other community events. Students enrolled in Show Choir will master the skills of dancing and singing at the same time. Students will learn and perform songs from modern popular music as well as other classic show-style tunes such as music from Broadway while doing exciting theatrical gestures. Students must audition and be placed into this ensemble.

Periods Per Week 5

Units of Credit 1

Semesters 2



PHYSICAL EDUCATION

Physical education's primary goal at Thomas Jefferson is to provide students with the necessary skills and knowledge that will allow them to lead healthy, active lifestyles.

To meet this goal, we present students with a primarily cooperative atmosphere, focusing on three areas:

- Developmentally appropriate tasks, such as throwing, catching, and striking, providing the skills foundation for future physical activity.
- The role of physical fitness in a student's life, and what one can do to achieve then maintain a high level of fitness.
- Constant affirmation of affective skills, such as sportsmanship, patience, and concentration, from which everyone can benefit.
- All students at Thomas Jefferson High School must enroll and participate in Physical education class in three of their four years in high school. For elective credit, students may exceed the 1.5 credits required for graduation.

The primary goal of health education at Thomas Jefferson is to influence healthy living and healthy choices for a lifetime. Have students develop an understanding of the components of health – physical, mental, emotional and social.

- Have students understand that physical activity should be part of your daily routine that promotes good health throughout a lifetime.
- Learning the basics of nutrition that can help you become a more healthful eater both now and later in life.
- Learn that nutrition and exercise are important to maintain healthy bones and muscles.
- Learning preventative measures from diseases and disorders.
- Learn how to handle and deal with stress in life.
- Provide students with the knowledge of the systems of the body, including integumentary, skeletal, muscular, and reproductive.
- Have students develop an understanding of the common sexually transmitted infections and how to prevent them.

PE1717 Foundations of Health and Safety (Elective)



The goal of this course is to help students recognize and respond appropriately to cardiac, breathing and first aid emergencies. This course teaches skills that students need to know to give immediate care to a suddenly injured or ill person until more advanced medical personnel arrive and take over. We will focus on basic first aid guidelines, and the use of CPR/AED when needed. The students will analyze different scenarios and act in the appropriate manner in order to help the victim. Upon conclusion of the course, students will have the opportunity to earn an American Red Cross certification in the following areas:

- Adult/Child/Infant CPR
- Adult/Pediatric AED
- Basic First Aid and Safety
- Anaphylaxis and Epinephrine Auto-Injector
- Using a Tourniquet
- Asthma Inhaler

Periods Per Week 5

Units of Credit .5

Semesters 1

PE1709 Physical Education 9



All 9th grade students will acquire, develop, and improve fitness and coordination skills in order to participate in moderate to vigorous activities. Students will select a team and/or lifetime activity at the beginning of each nine-week period and engage in a total of eight activities, four activity-based and four fitness-based, during the year.

Periods Per Week 5

Units of Credit .5

Semesters 1

PE1710 Health/ PE10



All students in grade 10 will have a combined health/pe course that will meet five days per week. The Health program offers the student information to consider when deciding to use or not use alcohol, tobacco and drugs. This information is presented from the physical, mental/emotional and social aspects experienced by students. During the grade 10 year, Health and PE will be combined into one course that meets every day for one semester. Major emphasis is placed on care of the human body, wellness and several major topics including nutrition, fad diets and eating disorders, stress, stress management and coping. A unit is presented on characteristics of, dealing with and prevention of sexually transmitted disease, along with AIDS/HIV prevention and treatment and human reproduction. Resource persons are used to supplement instruction whenever possible. Supplemental materials in the form of video films, resource papers and handouts are used in class work along with implementation of technology and labs. Health will meet three days a week on Monday through Wednesday of every week. Within this course, high school students will also take physical education class two days a week on Thursday and Friday for a semester. During PE class, students will acquire, develop, and improve fitness and coordination skills in order to participate in moderate to vigorous activities. Students will select a team and/or lifetime activity at the beginning of each nine-week period and engage in a total of eight activities, four activity-based and four fitness-based, during the year.

Periods Per Week 5

Units of Credit .5

Semesters 1

PE1719 Competitive Team Games 11/12



During a student's junior or senior year, he/she will have to choose between one of the two 11/12 PE electives offered in order to comply with the credits required for graduation. Competitive Team Games will include all units involving a high level of competition including: basketball, volleyball, soccer, speed ball, flag football, bat ball, dodgeball, hockey, lacrosse, etc. Students will select a competitive team game to participate in every 2 weeks for a total of 10 classes per unit.

Periods Per Week 5

Units of Credit .5

Semesters 1

PE1720 Individualized Fitness & Lifetime Activities 11/12



During a student's junior or senior year, he/she will have to choose between one of the two 11/12 PE electives offered in order to comply with the credits required for graduation. Individualized Fitness & Lifetime Activities will focus more on independent activities to help improve one's overall fitness, including: circuit training, yoga, walk/jog, etc., as well as less-competitive lifetime activities including: badminton, pickleball, tennis, bowling, archery, ping pong, can jam, corn hole, bocce, etc.

Periods Per Week 5

Units of Credit .5

Semesters 1

PE1716 Sports Theory and Applications



The overall goal of this course is to have students apply the theoretical background of sports to the practical side of competitions. We will focus on the development and history of sports and the social implications associated with significant sports moments. Specific emphasis will be placed on the theoretical background of seasonal sports predicated by the Olympic Games. The students will evaluate and analyze sports play, sports officiating, and different game strategies of these sports. The students will be involved in researching, debating, and officiating in order to create their own sports theories and strategies. Relevant topics that influence public perception of sports, such as diversity and cheating, will be discussed and debated as well. It is expected that students will research a sports topic of their choice and create a professional presentation to defend their findings.

0.5 elective credits; does not count as PE credit

Prerequisites Grades 9,10,11,12

Periods Per Week 5

Units of Credit .5

Semesters 1

PE1715 Partners in PE



This course is designed to give students excellent small group experiences working in the field of special education as a peer tutor and role model in the adapted physical education setting. Students will have the opportunity for hands-on experiences in the teaching process, learn more about disabling conditions, and develop knowledge and skills that promote wellness, sports training, and community recreation activities for all abilities that can be incorporated into a physically active and inclusive lifestyle. This course offers an opportunity to pair disabled and non-disabled peers together. The term "Athlete" is meant to refer to the student with disabilities. The term "Partner" is meant to refer to the student (with or without a disability) who will be working with the "Athlete" to help them achieve their personal, classroom, and IEP goals. Athletes and Partners are paired in 1:1 or 1:2 ratios to participate in the class together.

There is an application/interview process for students wishing to be "Partners." A one week orientation with the students in the class to discuss procedures, confidentiality, and information about various disabilities. All typical units and activities of the PE class take place, but with adaptations and accommodations.

Periods Per Week 5

Units of Credit .5

Semesters 1

PE1724 Advanced Weight Training

In this course, students will study sport-specific training techniques in order to improve their personal performance in their desired sport. This elite weight training course will focus on the individual needs of athletes according to the sports he/she is preparing to participate in. Depending on the season each student's sport is in, will determine whether focus will be on maintenance or strength training or flexibility. This course is reserved for varsity athletes or by teacher recommendation. Students will be required to create and follow a fitness plan as the semester progresses.

Periods Per Week 5

Units of Credit .5

Semesters 1

PE1725 Lifeguarding

This is the American Red Cross Lifeguarding course. Successfully completing the course will award the Lifeguard Certification which is valid for 2 years. Prerequisites that must be completed before continuing with the course: Minimum age of 15 years; Complete a swim-tread-swim sequence: jump into the water submerge resurface swim 150 yards maintain position at the surface of the water for 2 minutes by treading water using only the legs then swim 50 yards; Complete a timed event within 1 minute 40 seconds by starting in the water swimming 20 yards surface dive to a depth of 7 to 12 feet to retrieve a 10-pound object return to the surface and swim 20 yards on the back to return to the starting point holding the object at the surface with both hand exit the water without using a ladder or steps. Students will be responsible for the American Red Cross fee of \$255.00.

Periods Per Week 5

Units of Credit .5

Semesters 1

CAREER WORK STUDY PROGRAM/INTERNSHIP

PURPOSE

To provide career education and exploration through supervised community work activities.

STUDENT RESPONSIBILITIES

1. Request admission into the program and complete the application form.
2. Choose the work site.
3. Attend three class periods per day (minimum) at the high school.
4. Maintain a satisfactory school record. (Not more than one failure per semester.)
5. Maintain a satisfactory work record.
6. Abide by the work schedule agreed upon by the student, employer and school.
7. Not terminate employment during any given semester without the approval of the employer and school supervisor.

PARENT RESPONSIBILITIES

1. Provide liability coverage for students covering transportation to and from work.
2. Sign the application form.
3. Contact the school supervisor concerning any problems pertaining to the job.

SCHOOL COUNSELOR RESPONSIBILITIES

1. Verify accurate credit count to Assistant Principal for students applying to work study program verification by school counselor's signature on application.
2. Make all necessary changes to the student's schedule after final approval has been granted by the Principal.

EMPLOYER RESPONSIBILITIES

1. Abide by all laws and regulations governing the employment of students and minors.
2. Require a work permit if a student is younger than 18 years of age.
3. Assist school officials with the evaluation of the student's work performance.
4. Report any irregularities to school officials immediately, including termination.
5. Sign the application form.

WORK STUDY COORDINATOR RESPONSIBILITIES

1. Maintain an accurate record for students participating in the work study program.
2. Send evaluations via US Mail to the student's employer for each nine week period.
3. Record grades to student's permanent record. (Student will not receive credit if EMPLOYER fails to return evaluation.)
4. After final approval of Associate Principal, copy of complete application will be forwarded to School Counselor for their files.

TIME REQUIREMENTS

1. Must be during school hours.
2. Should be a daily work schedule.

ACADEMIC CREDITS

1. One credit = one hour per day five days per week.
2. Two credits = two hours per day five days per week.

STEEL CENTER FOR CAREER AND TECHNICAL EDUCATION

CAREER MAJORS (CIP CODES)

Steel Center offers 18 career majors. Each major is based on state and/or locally approved curricula, inclusive of written (theoretical) activities, performance tasks, demonstration of work ethic, and professionalism. For each major, students may earn three (3) or more Carnegie Units (credits) per year, depending on local sending school district policies for credit acquisition. Students may also earn industry certifications and college credit in their respective programs. Steel Center's career majors are as follows, listed alphabetically by local title and accompanied by Pennsylvania Classification of Instructional Program (CIP) codes:

ST1635 Advertising & Design (Program of Study)

GRADES 10-12

CIP Code: 50.0402, 3 or more credits/year.

Industry Certifications Available

Adobe Certified Associate Photoshop, InDesign, Illustrator, Adobe Premier Pro, OSHA 10 Hour Training CareerSafe & Pennsylvania Skills Certification

An instructional program in the applied visual arts that prepares individuals to use artistic techniques to effectively communicate ideas and information to business and consumer audiences via illustrations and other forms of printed media. This program includes instruction in concept design, layout, paste-up and techniques such as engraving, etching, silkscreen, lithography, offset, drawing and cartooning, painting, collage and computer graphics.

ST1622 Automotive Technology (Program of Study)

GRADES 10-12

CIP Code: 47.0604, 3 or more credits/year.

Industry Certifications Available

Pennsylvania State Automotive Safety Inspection, Pennsylvania State Emissions Inspection and EPA, Section 609 Certification for Refrigerant Recycling and Recovery & Pennsylvania Skills Certification

An instructional program that prepares individuals to apply technical knowledge and skills to engage in the servicing and maintenance of all types of automobiles and light trucks. This program includes instruction in the diagnosis and testing, including computer analysis, of malfunctions in and repair of engines, fuel, electrical, cooling and brake systems and drive train and suspension systems. Instruction is also given in the adjustment and repair of individual components and systems such as cooling systems, drive trains, fuel system components and air conditioning and includes the use of technical repair information and the state inspection procedures.

ST1632 Baking/Pastry Chef (Program of Study)

GRADES 10-12

CIP Code: 12.0501, 3 or more credits/year.

Industry Certifications Available

ServSafe Manager Food Safety, ServSafe Food Handler, ServSafe Allergens, S/P2 Culinary Safety & Pennsylvania Skills Certification

Specialized classroom and practical work experiences associated with the preparation of breads, crackers, cakes, pies, pastries and other bakery products for retail distribution, for consumption in a commercial food service establishment or for special functions. Instruction includes making, freezing and handling of bake products; decorating; counter display; and packaging of merchandise. This is a comprehensive program to prepare individuals for employment in a variety of occupations in the baking industry.

ST1633 Building Trades Maintenance (Program of Study) GRADES 10-12

CIP Code: 46.0401, 3 or more credits/year.

Industry Certifications Available

Pennsylvania Builder's Association Certification (PBA), OSHA-10 Hour Training CareerSafe, Forklift Operator, American Ladder Institute-Articulated Ladder, Mobile Ladder, Single and Extension Ladder & Pennsylvania Skills Certification

An instructional program that prepares individuals to apply technical knowledge and skills to keep a building functioning, and to serve a variety of structures including commercial and industrial buildings and mobile homes. Instruction includes the basics of carpentry, millwork, plumbing, painting, glazing, electricity, plastering, welding, minor sheet metal, concreting, bricklaying, tile setting, hardware usage, heating, ventilation, waterproofing, roofing and record keeping.

ST1619 Carpentry (Program of Study) GRADES 10-12

CIP Code: 46.0201, 3 or more credits/year.

Industry Certifications Available

Pennsylvania Builder's Association Certification (PBA), OSHA 10 Hour Training CareerSafe, Forklift Operator, S/P2 Construction Safety, American Ladder Institute-Articulated Ladder, Mobile Ladder, Single and Extension Ladder, Stop the Bleed & Pennsylvania Skills Certification

An instructional program that prepares individuals to apply technical knowledge and skills to lay out, fabricate, erect, install and repair structures and fixtures using hand and power tools. This program includes instruction in common systems of framing, construction materials, estimating, blueprint reading and finish carpentry techniques.

ST1639 Collision Repair and Refinishing (Program of Study) GRADES 10-12

CIP Code: 47.0603, 3 or more credits/year.

Industry Certifications Available

S/P2 Collision Safety, & Pennsylvania Skills Certification

An instructional program that prepares individuals to apply technical knowledge and skills to repair damaged automotive vehicles such as automobiles and light trucks. Students learn to examine damaged vehicles and estimate cost of repairs; remove, repair and replace upholstery, accessories, electrical and hydraulic window and seat operating equipment and trim to gain access to vehicle body and fenders; remove and replace glass; repair dented areas; replace excessively damaged fenders, panels and grills; straighten bent frames or unibody structures using hydraulic jacks and pulling devices; and file, grind and sand repaired surfaces using power tools and hand tools. Students refinish repaired surfaces by painting with primer and finish coat.

ST1621 Cybersecurity and Networking Technology (Program of Study) GRADES 10-12

CIP Code: 11.0901, 3 or more credits/year.

Industry Certifications Available

A+ Certification, Network+, IT Fundamentals+, Cisco Certified Network Associate, OSHA 10 Hour Training CareerSafe & Pennsylvania Skills Certification

A program that focuses on the design, implementation and management of linked systems of computers, peripherals and associated software to maximize efficiency and productivity, and that prepares the individuals to function as network specialist and managers at various levels. Includes instruction in operating systems and applications; system design and analysis; networking theory and solutions; types of networks; network management and control; network and flow optimization; security; configuring; and troubleshooting.

ST1624 Cosmetology (Career & Technical Program)**GRADES 10-12****CIP Code: 12.0401, 3 or more credits/year.****Industry Certifications Available**

Cosmetology License, Manicurist, Esthetician, S/P2 Cosmetology Safety & Pennsylvania Skills Certification

An instructional program that prepares individuals to apply technical knowledge and skills related to experiences in a variety of beauty treatments including the care and beautification of the hair, complexion and hands. Instruction includes training in giving shampoos, rinses and scalp treatments; hair styling, setting, cutting, dyeing, tinting and bleaching; permanent waving; facials; manicuring; and hand and arm massaging. Bacteriology, anatomy, hygiene, sanitation, salon management including record keeping and customer relations are also emphasized. Instruction is designed to qualify pupils for the licensing examination.

ST1623 Culinary Arts (Program of Study)**GRADES 10-12****CIP Code: 12.0508, 3 or more credits/year.****Industry Certifications Available**

ServSafe Manager Food Safety, ServSafe Food Handler, ServSafe Allergen, S/P2 Culinary Safety & Pennsylvania Skills Certification

An instructional program that prepares students for employment related to institutional, commercial or self-owned food establishments or other food industry occupations. Instruction and specialized learning experiences include theory, laboratory and work experience related to planning, selecting, preparing and serving of quantity food and food products; nutritive values; use and care of commercial equipment; safety; and sanitation precautions. Instruction are provided to individuals desiring to become employed in all areas of the food service industry at entry level.

ST1626 Electrical Construction (Program of Study)**GRADES 10-12****CIP Code: 46.0399, 3 or more credit/year.****Industry Certifications Available**

Pennsylvania Builder's Association Certification (PBA), OSHA 10 Hour Training CareerSafe & Pennsylvania Skills Certification

An instructional program that prepares individuals to apply technical knowledge and skills necessary to install, operate, maintain and repair electrically-energized residential, commercial and industrial systems, and DC and AC motors, controls and electrical distribution panels. Instruction emphasizes practical application of mathematics, science, circuit diagrams and use of electrical codes and includes blueprint reading, sketching and other subjects essential for employment in the electrical occupations. Reading and interpretation of commercial and residential construction wiring codes and specifications, installation and maintenance of wiring, service and distribution networks within large construction complexes are also critical components of the program.

ST1636 Health Assistants (Program of Study)**GRADES 10-12****CIP Code: 51.0899, 3 or more credits/year.****Industry Certifications Available**

Patient Care Technician/PCT, Basic Life Support Health Care Providers, & Pennsylvania Skills Certification

A cluster program with a combination of subject matter and experiences designed to prepare individuals for entry-level employment in a minimum of three related health occupations under the supervision of a licensed health care professional. Instruction consists of core course content with clinical experiences in one or two health related occupations. The core curriculum consists of planned courses for introduction of health careers, basic anatomy and physiology, medical terminology, legal and ethical aspects of health care and communications and at least three planned courses for the knowledge and skills for the occupational area such as medical assisting, ward clerk, nursing assisting, etc.

ST1618 Heating, Ventilation, Air Conditioning & Refrigeration (Program of Study)

GRADES 10-12

CIP Code: 47.0201, 3 or more credits/year.

Industry Certifications Available

EPA 608 Technician Certification, Section 609 Certification for Refrigerant Recycling and Recovery, American Ladder Institute-Articulated Ladder, Mobile Ladder, Single and Extension Ladder, Pennsylvania Builder's Association Certification (PBA), OSHA 30 Hour Training CareerSafe & Pennsylvania Skills Certification

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.

ST1642 Medical Professions (Program of Study)

GRADES 10-12

CIP Code: 51.9999, 3 or more credits/year.

Industry Certifications Available

Basic Life Support (BLS), Pharmacy Technician (CPhT), Phlebotomy Technician & Pennsylvania Skills Certification

An instructional program that prepares individuals to apply knowledge and skills in the health occupations. Instruction is provided in the basic skills in a variety of areas associated with health occupations such as health and medical services, pharmaceutical and medical instruments and supplies. Instruction includes but is not limited to foundations of health (medical terminology); anatomy and physiology; legal, ethical and economic aspects of health care; clinical laboratory procedures; basic health occupational skills; aseptic techniques; OSHA regulations; and infection control. Clinical education is an integral part of the program. Science and math taught by certificated science and math teachers will be coordinated and deemed essential for students to successfully reach their career objectives.

ST1620 Public Safety (Career & Technical Program)

GRADES 10-12

CIP Code: 51.0904, 3 or more credits/year.

Industry Certifications Available

Emergency Medical Technician, National Incident Management System, Basic Life Support CPR, Stop the Bleed, American Ladder Institute-Articulated Ladder, Mobile Ladder, Single and Extension Ladder & Hazardous Materials Response Awareness

A program that prepares individuals, under the remote supervision of physicians, to recognize, assess, and manage medical emergencies in prehospital settings and to supervise ambulance personnel. Students will learn about basic, intermediate, and advanced EMT procedures; emergency surgical procedures; medical triage; rescue operations; crisis scene management and personnel supervision; equipment operation and maintenance; patient stabilization, monitoring, and care; drug administration; identification and preliminary diagnosis of diseases and injuries; communication and computer operations; basic anatomy, physiology, pathology, and toxicology; and professional standards and regulations. Students will also learn fundamentals of police operations and fire protection, as well as technical and vehicle rescue. Physical development and self-confidence are emphasized due to the nature of the specific occupation(s) associated with public safety.

ST1643 Sports Medicine & Rehabilitation Professions (Career Technical & Program)

GRADES 10-12

CIP Code: 51.2604, 3 or more credits/year.

Industry Certifications Available

Basic Life Support CPR, First Aid, OSHA Healthcare Safety, OSHA 10 Hour Training CareerSafe & Pennsylvania Skills Certification

A program that prepares individuals to assist in rehabilitation services under the supervision of physical therapists, occupational therapists, speech-language pathologists, and other therapeutic professionals, and to perform routine functions in support of rehabilitation. Includes instruction in roles and responsibilities of rehabilitation providers, basic function of the human body, disabling conditions, therapeutic skills, client management, and communication skills.

ST1641 Veterinary Assistant (Career & Technical Program)

GRADES 10-12

CIP Code: 01.8301, 3 or more credits/year.

Industry Certifications Available

OSHA-10 Hour Health Care Safety, Red Cross Pet Tech First Aid, Purina Weight Coach, Fear Free & Pennsylvania Skills Certification

An instructional program that prepares individuals to support veterinarians by providing assistance during animal examinations, treatment administration and monitoring; by keeping animal and related health record information; and by performing a range of selected practice-related duties. This program is designed to provide instruction in preparing the animal for examination and treatment, sterilizing equipment and performing selected routine laboratory procedures under direct supervision of the veterinarian. Instruction also includes maintaining medical and business records, charting and scheduling activities and a wide range of practice-related duties as applied to animal health care, the biomedical field and the pet industry. The health occupational planned courses include the study of life sciences with emphasis on animal anatomy, physiology, diseases, reproduction, genetics, nutrition, animal laboratory procedures, aseptic technique, OSHA regulations, infection control and procedures. Clinical education is an integral part of the program. Science and math taught by certificated science and math teachers will be coordinated and deemed essential for students to successfully reach their career objectives.

ST1640 Welding (Program of Study)

GRADES 10-12

CIP Code: 48.0508, 3 or more credits/year.

Industry Certifications Available

AWS Certification, SP/2 Welding Safety, OSHA 10 Hour Safety, & Pennsylvania Skills Certification

An instructional program that prepares individuals to apply technical knowledge and skills in gas, arc, shielded and non-shielded metal arc, brazing, flame cutting and plastic welding. Hand, semi-automatic and automatic welding processes are also included in the instruction. Students learn safety practices and types and uses of electrodes and welding rods; properties of metals; blueprint reading; electrical principles; welding symbols and mechanical drawing; use of equipment for testing welds by ultrasonic methods and destruction and hardness testing; use of manuals and specification charts; use of portable grinders and chemical baths for surface cleaning; positioning and clamping; and welding standards established by the American Welding Society, American Society of Mechanical Engineers and American Bureau of Ships.

SCHOOL SPORTS AND ORGANIZATIONS

SCHOOL SPONSORED ORGANIZATIONS	
*Academic League	Interact Club
AP Humanities Club	International Club
Apiary Club	Multicultural Student Union
Best Buddies	**National Honor Society
Big Jag Little Cub Club	Outdoor Club
Chick-fil-A Leadership Academy	***Pickleball Club
Chess Club	Prom
Computer Club	Spanish Club
Dance Club	Spanish Honors Society
Drama Club	S.T.E.M. Club
eSports	Student Council
French Honors Society	TJ vs Cancer
GOLD	Winterguard
History Club	
*Must complete a test to qualify	**Must qualify academically
***Pending Board Approval	

SCHOOL SPONSORED SPORTS	
Baseball (Freshmen)	Soccer (Boys/Girls)
Baseball	Softball
Basketball (Boys/Girls)	Swimming & Diving (Boys/Girls)
Cheerleading	Tennis (Boys/Girls)
Cross Country (Boys/Girls)	Track and Field (Boys/Girls)
Football (10th Grade)	Volleyball (Boys/Girls)
JV & V Football	Junior High Wrestling
Golf (Boys/Girls)	Unified Bocce
Gymnastics	Wrestling
School Affiliated Sports Organizations: Bowling and Hockey	
Completed PIAA Comprehensive Sport forms are required for all athletic groups listed and must meet PIAA academic and attendance requirement	

CHILD FIND

CHILD FIND – SCREENING AND EVALUATION SERVICES FOR SCHOOL-AGE STUDENTS

The West Jefferson Hills School District provides a free, appropriate public education to eligible students. To qualify as an eligible student, the child must be of school age, in need of specially designed instruction, and meet eligibility criteria for one or more of the following physical or mental disabilities, as set forth in Individuals with Disabilities Improvement Act, IDEIA and referenced by Pennsylvania State Standards; autism, deaf blindness, deafness, emotional disturbance, hearing impairment, intellectual disability, multiple disabilities, orthopedic impairment, other health impairment, specific learning disability, speech or language impairment, traumatic brain injury, visual impairment including blindness.

The district uses the following procedures for locating, identifying, and evaluating specific needs of school-aged students requiring special programs or services. Screening efforts are designed to identify potential signs of developmental delays and other risk factors that could indicate disabilities. These procedures, as required by law, are as follows:

As prescribed by Section 1402 of the School Code, the district routinely conducts screenings of a child's hearing acuity in the following grades: Kindergarten, 1, 2, 3, 7 and 11. Visual acuity is screened in every grade. Speech and language skills are screened in Kindergarten and on a referral basis. Gross motor and fine-motor skills, academic skills, and social and/or emotional skills are assessed by classroom teachers and support staff on an on-going basis. Screening activities include review of group-based data, such as cumulative enrollment and health records, report cards, curriculum-based and performance-based assessments, and ability and achievement test scores. Identified needs from these screening sources as well as information obtained from parents and outside agencies, are assessed and noted within student records. School records are always open and available to parents, and only to school officials who have legitimate "need to know" information about the child. Information from the records is released to other persons or agencies only with appropriate authorization, which involves written permission, by parents.

If it is determined that a child needs additional services/interventions, the instructional team will make adjustments relative to such things as the child's learning style, behavior, physical inabilities, and speech problems to be more in keeping with traditional classroom expectancies. Parents are encouraged to be actively involved in the planning and implementation of intervention strategies. When the student does not make expected progress with this assistance or the screening results suggest that the student may be eligible, the district seeks parental consent to conduct a multidisciplinary evaluation.

If a MDE is appropriate, the district will provide "Permission to Evaluate" form to the parent outlining the purpose of the evaluation and the type of assessments that will be used. Parents must provide informed consent by signing and returning the permission before any evaluations can be completed. The purpose of the MDE is to establish the student's eligibility and need for special education and/or related services. Upon receipt of the signed permission, the district has 60 calendar days to complete the evaluation process. Parents who suspect their child is eligible may request an evaluation at any time to the building principal or contact the Special Education Department at 412-655-8450, ext. 2243. The request must be in writing. If the request is made orally, a copy of the "Permission to Evaluate" form will be provided to the parents within 10 calendar days of the oral request.

After the assessments are completed, an Evaluation Report (ER) will be compiled with parent involvement. The ER will determine if the student has a disability and requires specially designed instruction. The report will include specific recommendations for the types of intervention(s) necessary to deal with the child's specific needs. A copy of the Evaluation Report will be provided to the parent and the instructional team working with the student. For the student who has been found to be eligible for and in need of special education services, a meeting of the Individualized Education Program (IEP) team will be scheduled with parent involvement in order to develop the IEP for the student.

Eligible students are provided with a continuum of support and services designed to meet their individual needs. These services may include supplementary aids and services, and/or itinerant, supplemental or full-time support. The extent of special education services and the location for the delivery of such services are determined by the parents and staff at the IEP team meeting and are based on the student's identified needs and abilities, chronological age, and the intensity of the specified intervention. The school district also provides related services, such as transportation, physical therapy, and occupational therapy that are required to enable the student to derive educational benefits. Services are provided in the least restrictive environment to the maximum extent appropriate. The IEP team must first consider the regular classroom with the provision of supplementary aids and services before considering the provision of services in other settings.

Prior to the initiation of services, a "Notice of Recommended Educational Placement" (NOREP) must be signed by the parent indicating approval for the services to be provided. Parents may obtain additional information regarding special education services and/or parental due process rights by contacting the child's school principal or the Special Education Department at 412-655-8450, ext. 2242.

SERVICES FOR STUDENTS IN NONPUBLIC SCHOOLS

Parents of nonpublic school students who suspect that their child is eligible and in need of special education services may also make a request for screening and/or evaluation. Parental requests should be made in writing and directed to the West Jefferson Hills School District Special Education Department at 835 Old Clairton Road, Jefferson Hills, PA 15025. Special education services are accessible to nonpublic school students through dual enrollment following the multidisciplinary evaluation and the development of the IEP.

SERVICES FOR PROTECTED HANDICAPPED STUDENTS / CHAPTER 15 REGULATIONS

In compliance with state and federal law, the West Jefferson Hills School District will provide to each protected handicapped student without discrimination or cost to the student or family, those related aids services, or accommodations which are needed to provide equal opportunity to participate in and obtain the benefits of the school programs and extracurricular activities to the extent appropriate to the student's abilities. To qualify as a protected handicapped student, the child must be of school age with a physical or mental disability, which substantially limits or prohibits participation in or access to an aspect of the school program.

These services and protections for "protected handicapped students" are distinct from those applicable to all eligible students enrolled (or seeking enrollment) in special education programs. To obtain additional information about the evaluation procedures and provisions of services to protected handicapped students, contact the Special Education Department at 412- 655-8450, ext. 2242.

SERVICES FOR PRESCHOOL AGE CHILDREN

Act 212, the Early Intervention System Act, entitles all preschool age children with disabilities to appropriate early intervention services. Young children experiencing developmental delays or physical or mental disabilities are eligible for early intervention services.

The Pennsylvania Department of Public Welfare is responsible for providing services to infants and toddlers, defined as children from birth through two years of age. Contact: The Alliance for Infants and Toddlers, 2100 Wharton Street, Suite 705, Pittsburgh, PA 15203, 412-431-1905.

The Pennsylvania Department of Education is responsible for providing services to preschool age children from ages three through five. Contact Project DART, 475 E. Waterfront Drive, Homestead, PA 15120 or by phone at 412-394-5739 for more information.

SERVICES FOR GIFTED STUDENTS

According to the Pennsylvania Regulations and Standards in Special Education, mentally gifted pupils are defined as having:

"Outstanding intellectual and creative abilities the development of which requires special services not usually available in the regular education program. This term includes a person who has an IQ of 130 or higher and when multiple criteria as set forth in the Department of Education guidelines indicate gifted ability. Determination of gifted ability shall not be based on IQ score alone. Intellectual ability is and should reflect a range of assessments including a student's performance as well as potential. A person with an IQ score lower than 130 may be admitted to gifted programs when other educational criteria in the profile of the person strongly indicate gifted ability. Determination of mentally gifted shall include a full assessment and comprehensive report by a public school psychologist specifying the nature and degree of the ability."

West Jefferson Hills School District reviews student performance data to identify when a student may require differentiated instruction. These data include; standardized and criterion referenced test data, developmental checklists, curriculum-based assessments, formative evaluation procedures and portfolios. For students who require differentiated instruction, the instructional team reviews the strengths of the child and plans strategies designed to meet the child's needs (strengths). When a student's needs cannot be met within the general curriculum, a gifted multidisciplinary evaluation will be initiated upon written permission from the parents. If appropriate, a Gifted Individualized Education Plan (GIEP) will be written.

If you suspect your child may be mentally gifted, please contact the building principal or Special Education Department at 412- 655-8450, ext. 2242.

XELLO AND CAREER DEVELOPMENT

A Xello Feature for Every One of Your College and Career Readiness Needs

Xello offers a robust set of features that checks all of the boxes, but also makes college and career planning engaging and fun for your K-12 students.

SELF-KNOWLEDGE & SKILL-BUILDING CAREER MATCHMAKING ASSESSMENTS

Students learn about how their interests and personality traits impact the types of careers that they might find fulfilling. The Matchmaker assessment provides career suggestions that innately align with who students are, while also identifying career options they may not have thought of on their own.

SKILLS LAB ASSESSMENT

Students self-report on how often they would like to use skills in their future career. They're prompted to consider not only the skills they currently possess, but also those they may want to improve.

LEARNING STYLES ASSESSMENT

Students gain an understanding of their unique learning styles, with clear feedback and concrete techniques to help them study and retain information.

PERSONALIZED DIGITAL PORTFOLIO

Students create a personal portfolio that represents who they are today and captures their plans for the future. Customizable background images and avatars encourage students to make the space their own, and a shareable link makes sharing their journey with their networks easy.

TURNKEY CAREER AND COLLEGE READINESS CURRICULUM

A fully-integrated lesson curriculum designed to encourage reflection and help students apply learning. Lesson content teaches social-emotional competencies and practical skill-building and includes personalized content based on students' saved careers and interests.

STUDENT DASHBOARD FEED

A personalized news and social media-like feed that shows students safe, carefully curated content based on their selected areas of interest, saved schools, and saved careers.

The Dashboard Feed aims to create new learning opportunities and increase student engagement by surfacing helpful educational content in a fun, relatable way.

Throughout a student's time at Thomas Jefferson High School, students will be encouraged to develop specific career interests and create a career plan prior to the end of junior year. Xello provides different inventories, assessments, and research to help students learn more about future career paths.

Different students have different needs and we want students to be able to pursue an education that will make sure each student is on the way to a rewarding and sustaining career. With that in mind, information regarding each of the different career clusters is provided below. A description of the career cluster, employment outlook, and recommended electives at Thomas Jefferson and possible programs through Steel Center High School are included for each career cluster.

Recommended core classes are not included within each career cluster and can vary from one cluster to another as well as based on a student's interest and abilities. The recommended elective options are by no means required for a specific cluster nor will the list always fit with each individual student's needs.

In general, it is important that students pursue that about which they are passionate. There will be overlap with different clusters and interests and this should be used as a guide to have students think about life after high school. Students interested in a STEM (Science, Technology, Engineering, and Math) career cluster should absolutely take a music class if they love music. The opposite is true for students considering a career in the arts if there is a love for science - take a science class.

Use high school as a time to develop, test out, and pursue possible careers. After high school it is important to earn a post-high school credential. Apprenticeships, technical schools, four year degrees, and professional degrees are all forms of post-secondary credentials. Apprenticeships and Steel Center programs provide students the opportunity to gain a specialized credential without having to pay for much additional schooling. Trade and technical schools along with two year associate degree programs allow you to pursue specific career-related degrees that can lead to employment. Traditional four year degrees provide a post-secondary credential and can lead to professional degree programs (Pharmacy, Medical School, Law School, etc).

CAREER CLUSTERS

Agriculture, Food and Natural Resources

Description	<p>The Agriculture, Food and Natural Resources Career Cluster is divided into seven pathways. Pathways are grouped by common knowledge and skills required of occupations in these career fields. Each pathway provides instruction as a basis for success in an array of careers and educational pursuits.</p> <p>This diverse Career Cluster prepares learners for careers in the planning, implementation, production, management, processing, and/or marketing of agricultural commodities and services, including food, fiber, wood products, natural resources, horticulture, and other plant and animal products. It also includes related professional, technical and educational services.</p>
Employment Outlook	<p>Employment opportunities will continue to increase for those who provide and market an expanding array of food, forest, and veterinary medical consumer products to a growing world population. Continued globalization of the food, agricultural and natural resources system will increase opportunities for graduates who understand the socio-economic factors that define international markets. Graduates who know how to satisfy the diverse consumer needs and preferences in different cultures, and who have the language skills to communicate effectively, will have the best opportunities to be employed by the growing number of multinational businesses.</p>
Pathways	<ul style="list-style-type: none"> • Agribusiness Systems • Animal Systems • Environmental Service Systems • Food Products and Processing Systems • Natural Resource Systems • Plant Systems • Power, Structural and Technical Systems
Suggested Elective Courses	<p>Public Speaking, Environmental Science, AP Environmental Science, Anatomy and Physiology, Economics, Law, Sociology, Psychology, Statistics and Probability, Business Computer Fundamentals, Tech Lab, Commercial Design, Foods and Nutrition, Career Work Study</p>
Steel Center Career Pathways Options	<p>Heating, Air Conditioning & Refrigeration, Electrical Construction</p>
Possible Careers	<p>Agricultural and Food Science Techs, Agricultural Equipment Operators, Animal Scientists, Biochemists and Biophysicists, Agribusiness, Conservation Scientists, Environmental Engineering Technicians, Farmers, Floral Designers, Foresters, Graders and Sorters, Agricultural Products, Grounds Maintenance Workers, Mechanical Engineering Technicians, Service Unit Operators, Oil, Gas, and Mining, and many others!</p>
Related Majors	<p>Agribusiness/Agricultural Business Operations, Animal Sciences, Dairy Science, Forestry, General, Parks, Recreation and Leisure Studies, Plant Sciences, Turf and Turfgrass Management, Wildlife and Wildlands Science and Management, and many others!</p>

Architecture and Construction

Description	The Architecture and Construction Career Cluster is divided into three pathways. Pathways are grouped by the knowledge and skills required for occupations in these fields. Each pathway provides instruction as a basis for success in an array of careers and educational pursuits. This diverse Career Cluster prepares learners for careers in designing, planning, managing, building and maintaining the built environment. People employed in this cluster work on new structures, restorations, additions, alterations and repairs.
Employment Outlook	Architecture and construction comprise one of the largest industries in the United States. Based on the latest statistics, this career cluster has 7.8 million jobs. In the next few years, many new jobs will be added and many employment opportunities will result from the need to replace experienced workers who leave jobs.
Pathways	<ul style="list-style-type: none"> • Design/Pre-Construction • Construction • Maintenance/Operations
Suggested Elective Courses	Architecture, Construction Technology, Engineering, Tech Lab, Robotics, Economics, Psychology, Public Speaking, Business Computer Fundamentals
Steel Center Career Pathways Options	Building Trades, Carpentry, Electrical Construction Heating, Air Conditioning & Refrigeration, Welding
Possible Careers	Architects, Carpet Installers, Civil Engineering Technicians, Construction Laborers, Construction Managers, Cost Estimators, Engineering Technicians, Heating and Air Conditioning Mechanics and Installers, Interiors Designers, Pipefitters and Steamfitters, Railroad Conductors and Yardmasters, Refrigeration Mechanics and Installers, Rotary Drill Operators, Oil and Gas, Stonemasons, Surveying Technicians, and many more
Related Majors	Architectural Drafting and Architectural CAD, Architecture (BArch, BA/BS, etc), Boilermaker, Building Construction Management, Carpentry, Construction Trades, Drywall Installation, Electrical and Power Transmission Installers, Electrician, Environmental Design/Architecture, Heating, Air Conditioning, Ventilation and Refrigeration Technology, Ironworker, Landscape Architecture, Surveying Engineer, and many more!

Arts, Audio/Video Technology and Communications

Description	<p>This cluster offers two different avenues of concentration. Careers in the Performing Arts, Visual Arts or certain aspects of Journalism, Broadcasting and Film require courses and activities that challenge students' creative talents.</p> <p>Careers in Audio-Video Communications Technology, Telecommunications or Printing Technology require strong backgrounds in computer and electronic-based technology and a solid foundation in math and science. All require an ability to effectively communicate in both oral and written form. In addition, the creative aspects of this cluster are rapidly merging with the technological, making it even more challenging. Preparation for careers in this cluster must begin in the early years and continue through high school, allowing students to gain experience in the performing and visual arts as well as in the academic foundations.</p>
Employment Outlook	<p>There were about 1.8 million jobs in the occupations that are assigned to the arts, audio/video technology, and communications cluster. Median annual wages for these occupations ranged from \$24,220 for floral designers to \$83,000 for art directors. Most job openings in the arts, audio/video technology, and communications cluster are projected to be in occupations assigned to the visual arts pathway, which includes graphic designers. This occupation is projected to have the most job openings in the cluster.</p>
Pathways	<ul style="list-style-type: none"> • Audio and Video Technology and Film • Journalism and Broadcasting • Performing Arts • Printing Technology • Telecommunications • Visual Arts
Suggested Elective Courses	<p>Introduction to Film Criticism, Journalism, Introduction to Public Relations, Performing Arts, Public Speaking, Theater Orientation, Psychology, Sociology, Incubatoredu - Entrepreneurship, Exploratory Business, Marketing, Personal Finance, Business Computer Fundamentals, TJTV, TJTV 2, Technology Lab, Adult Living, Fabric, Fashion and Design 1, 2, & 3, Interior Design, Introduction to Family & Consumer Science, AP Studio Art, Graphic Design, Ceramics, Creative Studio Media, Studio Art 1&2, Mixed Media Arts, Video Production, Music Theory and History, Music Theory II, Marching/ Symphonic Band, Choir, Jazz Ensemble, String Ensemble, Percussion Ensemble, Career Work Study</p>
Steel Center Career Pathways Options	<p>Advertising & Design Cosmetology</p>
Possible Careers	<p>Actors, Broadcast Technicians, Copy Writers, Media and Communication Workers, Producers and Directors, Public Relations Specialists, Radio and TV Announcers, Sound Engineering Technicians, Writers and Authors, and many more</p>
Related Majors	<p>Animation, Broadcast Journalism, Commercial Photography, Digital Communication and Media, Film Studies, Graphic Design, Photojournalism, Radio and Television, Performing Arts, and many more</p>

Business Management and Administration

Description	<p>There are many challenging educational and training opportunities within the high-skilled world of Business Management and Administration. Learners need a solid background in math, science and technical skills. Education and training can be obtained in high schools, technical colleges/institutes, and universities.</p> <p>Along the way, career guidance professionals assist learners in assessing their educational goals, interests, abilities and skills to facilitate a good match to the cluster's many pathway options. Learners participate in relevant educational opportunities framed in the context of the cluster. They gain knowledge and skills through coordinated workplace learning experiences such as site visits, job shadowing and internships. If they choose, they may achieve valuable skill certifications that lead to employment. Colleges and universities offer advanced degrees and industry certifications that prepare learners for professional and technical careers.</p> <p>The Business Management and Administration Cluster prepares learners for careers in planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Career opportunities are available in every sector of the economy and require specific skills in organization, time management, customer service and communication.</p>
Employment Outlook	<p>Nearly half of all jobs are in managerial and professional occupations, and nearly one-fourth of all workers are self-employed. The business management and administration services industry is one of the highest paying industries. Most job openings in the business management and administration cluster are projected to be in occupations assigned to the administrative support pathway, including customer service representatives, the occupation expected to have the largest number of job openings in the cluster.</p>
Pathways	<ul style="list-style-type: none"> • Administrative Support • Business Information Management • General Management • Human Resources Management • Operations Management
Suggested Elective Courses	<p>Introduction to Public Relations, Public Speaking, Economics, Psychology, Sociology, Statistics and Probability, Accounting, Accounting II, Accounting III, INCubatoredu - Entrepreneurship, Exploratory Business, Marketing, Personal Finance, Retail Management, Business Computer Fundamentals, World Languages (Spanish or French), Adult Living, Career Work Study</p>
Steel Center Career Pathways Options	<p>Advertising & Design</p>
Possible Careers	<p>Accountants, Advertising Sales Agents, Data Entry Keyers, Financial Managers, General and Operations Managers, Human Resources Specialists, Market Research Analysts and Marketing Specialists, Purchasing Managers, Receptionists and Information Clerks, Statisticians, Transportation, Storage, and Distribution Managers, and many more</p>
Related Majors	<p>Accounting, Advertising, Business Technology, Human Resources, Information Resources Management, International Business, Labor Studies, Logistics and Materials Management, Public Relations, Receptionist, and many others</p>

Education and Training

Description	<p>There are many challenging educational and training opportunities within the high-skilled world of Education and Training. Learners need a solid background in academic, technical and presentation/ facilitation skills. The educational background for a career in the education and training field can begin in high schools, technical colleges/ institutes, and universities.</p> <p>Along the way, career guidance professionals assist learners in assessing their educational goals, interests, abilities and skills to facilitate a good match to the cluster's many pathway options. Learners participate in relevant educational opportunities framed in the context of the cluster. They gain knowledge and skills through coordinated workplace learning experiences such as site visits, job shadowing and internships. If they choose, they may achieve valuable skill certifications that lead to employment. Colleges and universities offer advanced degrees that prepare learners for professional and technical careers.</p> <p>This diverse Career Cluster prepares learners for careers in planning, managing and providing education and training services, and related learning support services. Each year many learners train for careers in education and training in a variety of settings that offer academic instruction, career technical instruction, and other education and training services.</p>
Employment Outlook	<p>A growing emphasis on improving education and making it available to more Americans will increase the overall demand for workers in the education and training cluster. Employers are expected to devote greater resources to job-specific training programs in response to the increasing complexity of many jobs and technological advances that can leave employees with obsolete skills. A substantial number of older teachers are expected to reach retirement age through 2024. Their retirement will increase the need to replace workers who leave the occupation. This will result in a particularly strong demand for training and development specialists across all industries.</p>
Pathways	<ul style="list-style-type: none"> • Administration and Administrative Support • Professional Support Services • Teaching and Training
Suggested Elective Courses	<p>Public Speaking, Psychology, Sociology, Personal Finance, Business Computer Fundamentals, World Languages (Spanish or French), Child Development I, Nursery School Lab, Sports Theory & Application, Foundations of Health & Safety, Career Work Study</p>
Steel Center Career Pathways Options	
Possible Careers	<p>Adult Literacy Instructors, Teachers (specialized by interest), Instructional Coordinators, Interpreters and Translators, Librarians, Recreation Workers, Teacher Assistants, and many others</p>
Related Majors	<p>Administration of Special Education, Counselor Education/School Counseling, Curriculum and Instruction, Early Childhood Education, Education, Library Science, Teaching English as a Second or Foreign Language/ESL Language Instructor, and many others</p>

Finance

Description	<p>There are thousands of challenging educational and training opportunities within the high-skilled world of Finance. Learners need a solid background in math, science and technical skills. Education and training can be obtained in high schools, technical colleges, two-year community colleges, four-year colleges, and career technical schools/ institutes.</p> <p>Along the way, career guidance professionals assist learners in assessing their educational goals, interests, abilities and skills to facilitate a good match to the cluster's many pathway options. Learners participate in relevant educational opportunities framed in the context of the cluster. They gain knowledge and skills through coordinated workplace learning experiences such as site visits, job shadowing and internships. If they choose, they may achieve valuable skill certifications that lead to employment. Colleges and universities offer advanced degrees and industry certifications that prepare learners for professional and technical careers.</p> <p>The Finance Cluster prepares learners for careers in financial and investment planning, banking, insurance and business financial management. Career opportunities are available in every sector of the economy and require specific skills in organization, time management, customer service and communication.</p>
Employment Outlook	<p>The finance industry is a critical sector of the United States economy with over 5 million people employed in finance-related occupations. Although some of the finance occupations project only moderate growth through the year 2024, the advances in technology and trends in digital marketing provide exciting and challenging opportunities for careers across all areas of the cluster, especially in the banking services pathway. In the next few years, many new jobs will be added and many openings will result from the need to replace experienced workers who leave jobs.</p>
Pathways	<ul style="list-style-type: none"> • Accounting • Banking Services • Business Finance • Insurance • Securities and Investments
Suggested Elective Courses	<p>Public Speaking, Economics, Law, Psychology, Sociology, Statistics and Probability, Calculus, Accounting, Accounting II, Accounting III, Incubator - Entrepreneurship, Exploratory Business, Marketing, Personal Finance, Retail Management, Python - Introduction to Programming, Business Computer Fundamentals, World Languages, Career Work Study</p>
Steel Center Career Pathways Options	
Possible Careers	<p>Actuary, Claims Adjusters, Financial Analysts, Insurance Underwriters, Personal Financial Advisors, Sales Agents, Treasurers and Controllers, and many more</p>
Related Majors	<p>Actuarial Science, Banking and Financial Support Services, Finance, Insurance, Investments and Securities, and many others</p>

Government and Public Administration

Description	<p>There are many challenging educational and training opportunities within the high-skilled world of Government and Public Administration. Learners need a solid background in social studies, political science, foreign language and history. Education and training can be obtained in high schools, technical colleges/institutes and universities.</p> <p>Along the way, career guidance professionals assist learners in assessing their educational goals, interests, abilities and skills to facilitate a good match to the cluster's many pathway options. Learners participate in relevant educational opportunities framed in the context of the cluster. They gain knowledge and skills through coordinated workplace learning experiences such as site visits, job shadowing and internships. If they choose, they may achieve valuable skill certifications that lead to employment. Colleges and universities offer advanced degrees that prepare learners for professional and technical careers.</p> <p>Government affects everyone in countless ways. In a democratic society, government is the means of expressing the public will. In fact, virtually every occupation can be found within the government. There are some activities unique to the government. The federal government defends the public from foreign aggression; represents the nation's interests abroad; deliberates, passes and enforces laws; and administers many different programs. State and local governments pass laws or ordinances and provide vital services to constituents. There are many opportunities in government in every career area. The Government and Public Administration Career Cluster focuses on unique careers only available within government.</p>
Employment Outlook	<p>Because of its public nature, the factors that influence federal government staffing levels are unique. The Congress and President determine the government's payroll budget. Each Presidential Administration and Congress have different public policy priorities, which increase levels of federal employment in some programs and decrease federal employment in others.</p> <p>State and local government employment is projected to increase marginally during the next decade, however, efforts to cut spending are expected to result in a decline in federal government employment. Jobs growth will stem from a rising demand for services at the state and local levels. An increasing population, along with state and local assumption of responsibility for some services previously provided by the federal government, is fueling the growth of these services.</p>
Pathways	<ul style="list-style-type: none"> • Foreign Service • Governance • National Security • Planning • Public Management and Administration • Regulation • Revenue and Taxation

Suggested Elective Courses	Public Speaking, Introduction to Public Relations, Environmental Science, AP Environmental Science, Shaping the Modern World, Economics, Law, Psychology, Sociology, Statistics and Probability, Accounting, Accounting II, Accounting III, AP Computer Science, Apple Swift Programming, C++, Cyber Forensics, Exploratory Business, Personal Finance, Python - Introduction to Programming, Business Computer Fundamentals, Web Page Development & Design, Engineering, Tech Systems, Robotics, Technology Lab, World Languages, Foundations of Health & Safety, Career Work Study
Steel Center Career Pathways Options	Computer Information Systems Protective Service
Possible Careers	Auditors, Chief Executives, Emergency Management Directors, Legislators, Political Scientists, Public Relations Specialists, Transportation Managers, Urban and Regional Planners and many more
Related Majors	American Government and Politics, City/Urban, Community and Regional Planning, Political Communication, Political Science and Government, Public Policy Analysis, and many others

Health Science

Description	<p>There are many challenging educational and training opportunities within the high-skilled world of Health Science. Learners need a solid background in math, science, communications, and technical skills. Education and training can be obtained in high schools, technical colleges/institutes and universities.</p> <p>Along the way, career guidance professionals assist learners in assessing their educational goals, interests, abilities and skills to facilitate a good match to the cluster's many pathway options. Learners participate in relevant educational opportunities framed in the context of the cluster. They gain knowledge and skills through coordinated workplace learning experiences such as site visits, job shadowing and internships. If they choose, they may achieve valuable skill certifications that lead to employment. Colleges and universities offer advanced degrees and industry certifications that prepare learners for professional and technical careers.</p> <p>This Health Science Career Cluster orients students to careers that promote health, wellness, and diagnosis as well as treat injuries and diseases. Some of the careers involve working directly with people, while others involve research into diseases or collecting and formatting data and information. Work locations are varied and may be in hospitals, medical or dental offices or laboratories, cruise ships, medevac units, sports arenas, space centers, or within the community.</p>
Employment Outlook	<p>Employment of healthcare occupations is projected to grow 19 percent through 2024, much faster than the average for all occupations. This growth is expected due to an aging population and because federal health insurance reform should increase the number of individuals who have access to health insurance.</p> <p>The median annual wage for healthcare practitioners and technical occupations (such as registered nurses, physicians and surgeons, and dental hygienists) is \$61,710, which is higher than the median annual wage for all occupations in the economy of \$35,540. However, healthcare support occupations (such as home health aides, occupational therapy assistants, and medical transcriptionists) have a median annual wage of \$26,440, lower than the median annual wage for all occupations in the economy.</p> <p>Home health aides are predicted to grow by 38 percent, medical assistants will grow by 23 percent, and physician assistants will grow by 30 percent. The continued growth in both the aging and general population, as well as an increase in several chronic diseases, such as diabetes, will drive the need for more healthcare jobs.</p>
Pathways	<ul style="list-style-type: none"> • Biotechnology Research and Development • Diagnostic Services • Health Informatics • Support Services • Therapeutic Services
Suggested Elective Courses	<p>Public Speaking, Anatomy & Physiology, Environmental Science, AP Environmental Science, Psychology, Sociology, Statistics & Probability, Calculus, Python - Introduction to Programming, Business Computer Fundamentals, World Languages, Foundations of Health & Safety, Career Work Study</p>

Steel Center Career Pathways Options	Computer Information Systems Health Assistants Protective Service
Possible Careers	Administrative Services Managers, Ambulance Drivers and Attendants, Athletic Trainers, Chiropractors, Computer Programmers, Dental Assistants, Dietitians and Nutritionists, Emergency Medical Technicians and Paramedics, Health Diagnosing Practitioners, Medical Records and Health Information Technicians, Medical Secretaries, Nuclear Technicians, Occupational Health and Safety Specialists, Occupational Therapists, Pharmacists, Physical Therapist Assistants, Physicists, Respiratory Therapists, Surgeons, Veterinarians, and many more
Related Majors	Allied Health and Medical Assisting, Anesthesiologist Assistant, Athletic Training/Trainer, Speech-Language Pathology, Communication Disorders Sciences, Sonography and Ultrasound Technician, Health Services Administration, Medical Informatics, Medicine, Occupational Therapy, Pharmacy Technician, Public Health, Veterinary Medicine, and many more

Hospitality and Tourism

Description	<p>There are many challenging educational and training opportunities within the high-skilled world of Hospitality and Tourism. Learners need a solid background in math, science and technical skills. Education and training can be obtained in high schools, technical colleges/institutes and universities.</p> <p>Along the way, career guidance professionals assist learners in assessing their educational goals, interests, abilities and skills to facilitate a good match to the cluster's many pathway options. Learners participate in relevant educational opportunities framed in the context of the cluster. They gain knowledge and skills through coordinated workplace learning experiences such as site visits, job shadowing and internships. If they choose, they may achieve valuable skill certifications that lead to employment. Colleges and universities offer advanced degrees and industry certifications that prepare learners for professional and technical careers.</p> <p>The Hospitality and Tourism Cluster prepares learners for careers in the management, marketing and operations of restaurants and other food services, lodging, attractions, recreational events and travel-related services. Hospitality operations are located in communities throughout the world.</p>
Employment Outlook	<p>The hospitality and tourism industry directly supports over 5 million jobs and is one of the biggest job generators in the US, generating over 9 percent of the country's employment. Salaries depend on the employee's skills, education and job level at a hotel, restaurant, tourism office, recreation facility, amusement park or attraction site. Median annual salaries for these occupations range from \$18,330 for combined food preparation and serving workers to \$66,200 for gaming managers. This industry is known for promoting within and for its large number of young managers.</p>
Pathways	<ul style="list-style-type: none"> • Lodging • Recreation, Amusements and Attractions • Restaurants and Food/Beverage Services • Travel and Tourism
Suggested Elective Courses	<p>Public Speaking, Introduction to Public Relations, Economics, Psychology, Sociology, Statistics and Probability, Exploratory Business, Marketing, Accounting I, Accounting II, Accounting III, Personal Finance, Business Computer Fundamentals, Web Page Development & Design, Python - Introduction to Programming, Incubatoredu - Entrepreneurship, World Languages, Foods and Nutrition, Introduction to Family and Consumer Science, Basic Graphic Design, Mixed Media Arts, Photography/Video Production, Career Work Study</p>
Steel Center Career Pathways Options	<p>Advertising & Design Baking/Pastry Chef Culinary Arts</p>
Possible Careers	<p>Bakers, Chefs, Farm and Home Management Advisors, Gaming Managers, Lodging Managers, Reservation and Transportation Ticket Agents and Travel Clerks, Slaughterers and Meat Packers, Travel Agents, and many more</p>
Related Majors	<p>Baking and Pastry Arts, Bartender, Facilities Planning and Management, Hospitality Administration/Management, Hotel Management, Personal and Culinary Services, Tourism Promotion Operations and many more</p>

Human Services

Description	<p>There are many challenging educational and training opportunities within the high-skilled world of Human Services. Learners need a solid background in communication, science and technical skills. Education and training can be obtained in high schools, technical colleges/institutes and universities.</p> <p>Along the way, career guidance professionals assist learners in assessing their educational goals, interests, abilities and skills to facilitate a good match to the cluster's many pathway options. Learners participate in relevant educational opportunities framed in the context of the cluster. They gain knowledge and skills through coordinated workplace learning experiences such as site visits, job shadowing and internships. If they choose, they may achieve valuable skill certifications that lead to employment. Colleges and universities offer advanced degrees and industry certifications that prepare learners for professional and technical careers.</p> <p>This diverse Career Cluster prepares individuals for employment in career pathways related to families and human needs.</p>
Employment Outlook	<p>Based on the latest statistics, approximately 5 million people are employed in human services occupations. Faster than average employment growth through the year 2024, coupled with high turnover, should create numerous employment opportunities. Median annual wages for these occupations vary. For example, the median annual wage for shampooers is \$18,510, and the wage for industrial-organizational psychologists is \$80,330.</p>
Pathways	<ul style="list-style-type: none"> • Consumer Services • Counseling and Mental Health Services • Early Childhood Development and Services • Family and Community Services • Personal Care Services
Suggested Elective Courses	<p>Public Speaking, Anatomy & Physiology, Psychology, Sociology, Statistics & Probability, Personal Finance, Business Computer Fundamentals, World Languages, Adult Living, Child Development I, Child Development II, Foundations of Health & Safety, Career Work Study</p>
Steel Center Career Pathways Options	<p>Cosmetology Protective Services</p>
Possible Careers	<p>Chief Executives, Childcare Workers, Counseling Psychologists, Epidemiologists, Funeral Service Managers, Healthcare Social Workers, Interpreters and Translators, Probation Officers and Correctional Treatment Specialists, Protective Service Workers, School Psychologists, Sociologists, and many more</p>
Related Majors	<p>Business Family and Consumer Sciences, Child Development, Christian Studies, Cosmetology, Family Systems, Logic, Mental Health Counseling, Mortuary Science, Philosophy, Public Administration and Social Service Professions, Substance Abuse Counseling, Youth Ministry, and many more</p>

Information Technology

Description	<p>IT careers involve the design, development, support and management of hardware, software, multimedia and systems integration services. The IT industry is a dynamic and entrepreneurial working environment that has a revolutionary impact on the economy and society. In addition to careers in the IT industry, IT careers are available in every sector of the economy from Financial Services to Medical Services, from Business to Engineering and Environmental Services.</p> <p>Anyone preparing for an IT career should have a solid grounding in math and science.</p> <p>A career in IT is challenging and ever-changing. Those who pursue jobs in the IT sector will quickly discover ongoing opportunities to learn about and work with exciting new technologies that are transforming the world. IT education can be obtained in high schools, technical colleges/institutes and universities.</p>
Employment Outlook	<p>Employment of computer and information technology occupations is projected to grow 12 percent over the next decade, in part due to a greater emphasis on cloud computing, the collection and storage of big data, more everyday items becoming connected to the internet in what is commonly referred to as the "Internet of things," and the continued demand for mobile computing. The median annual wage for computer and information technology occupations is \$79,390, ranging from \$46,620 for computer user support specialists to \$98,430 for computer network architects.</p>
Pathways	<ul style="list-style-type: none"> • Information Support and Service • Network Systems • Programming and Software Development • Web and Digital Communications
Suggested Elective Courses	<p>Statistics & Probability, Calculus, Advanced Placement Computer Science, Apple Swift Programming, C++, Programming, Incubatoredu - Entrepreneurship, Cyber Forensics, Personal Finance, Python - Introduction to Programming, Business Computer Fundamentals, Web Page Development and Design, Engineering, Tech Systems, Robotics, Technology Lab, World Languages, Career Work Study Program, Basic Graphic Design</p>
Steel Center Career Pathways Options	<p>Computer Information Systems</p>
Possible Careers	<p>Computer and Information Research Scientists, Computer Hardware Engineers, Computer Network Architects, Computer Programmers, Database Administrators, Information Security Analysts, Software Developers</p>
Related Majors	<p>Artificial Intelligence and Robotics, Computer and Information Systems Security, Computer Science, Data Modeling, Information Technology, System, Networking, and LAN/WAN Management, Web/Multimedia Management and Webmaster, and many more</p>

Law, Public Safety, Corrections and Security

Description	There are many challenging educational and training opportunities within the high-skilled world of Law, Public Safety, Corrections and Security. Learners need a solid background in math, science and technical skills. Education and training can be obtained in high schools, technical colleges/institutes and universities. Along the way, career guidance professionals assist learners in assessing their educational goals, interests, abilities and skills to facilitate a good match to the cluster's many pathway options. Learners participate in relevant educational opportunities framed in the context of the cluster. They gain knowledge and skills through coordinated workplace learning experiences such as site visits, job shadowing and internships. If they choose, they may achieve valuable skill certifications that lead to employment. Colleges and universities offer advanced degrees that prepare learners for professional and technical careers. The Law, Public Safety, Corrections and Security Cluster helps prepare students for careers in planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services.
Employment Outlook	There are approximately 5 million jobs in the occupations assigned to the law, public safety, corrections, and security cluster. Employment of protective services and legal occupations is projected to grow around 5 percent through 2024. Numerous job openings will stem from employment growth attributable to the continued desire for increased corporate, industrial and homeland security, and the maintenance of public safety. Median annual wages for these occupations range from \$19,040 for lifeguards, ski patrol, and other recreational protective service workers, to \$118,150 for judges, magistrate judges, and magistrates.
Pathways	<ul style="list-style-type: none"> • Correction Services • Emergency and Fire Management Services • Law Enforcement Services • Legal Services • Security and Protective Services
Suggested Elective Courses	Public Speaking, Anatomy & Physiology, Economics, Law, Psychology, Sociology, Business Computer Fundamentals, World Languages, Adult Living, Foods and Nutrition, Foundations of Health & Safety, Career Work Study
Steel Center Career Pathways Options	Protective Service
Possible Careers	Administrative Law Judges, Adjudicators, and Hearing Officers, Bailiffs, Child, Family, and School Social Workers, Court Reporters, Firefighters, Forensic Science Technicians, Lawyers, Legal Secretaries, Paralegals and Legal Assistants, Police Detectives, Security Guards, Transit and Railroad Police, and many more
Related Majors	American Law, Banking, Corporate, Finance, & Securities Law, Corrections, Criminology, Fire Protection, Juvenile Corrections, Securities Services Administration/Management, Security and Loss Prevention Services, and many more

Manufacturing

Description	<p>There are many challenging educational and training opportunities within the high-skilled world of Manufacturing. Learners need a solid background in math, science and technical skills. Education and training can be obtained in high schools, technical colleges/institutes and universities.</p> <p>Along the way, career guidance professionals assist learners in assessing their educational goals, interests, abilities and skills to facilitate a good match to the cluster's many pathway options. Learners participate in relevant educational opportunities framed in the context of the cluster. They gain knowledge and skills through coordinated workplace learning experiences such as site visits, job shadowing and internships. If they choose, they may achieve valuable skill certifications that lead to employment. Colleges and universities offer advanced degrees and industry certifications that prepare learners for professional and technical careers. Apprenticeship programs prepare learners for journey-worker status.</p> <p>Industry plays a major role in training and career development by supporting apprenticeships, training, joint industry/school programs and industry training leading to certification and college/university credit.</p> <p>This diverse Career Cluster prepares learners for careers in planning, managing, and performing the processing of materials into intermediate or final products. Careers also include related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.</p>
Employment Outlook	<p>There are approximately 12 million jobs in the occupations that are assigned to the manufacturing cluster. Technological advancements are replacing many of the manufacturing workers that make up a large share of the production occupations. Fewer workers are needed in the manufacturing sector as many processes have become computer-controlled. While production occupations are projected to decline 3 percent through 2024, installation, maintenance, and repair occupations are projected to grow 6 percent, about as fast as the average for all occupations. Median annual wages for these occupations range from \$21,490 for sewing machine operators to \$78,350 for nuclear power reactor operators.</p>
Pathways	<ul style="list-style-type: none"> • Health, Safety and Environmental Assurance • Logistics and Inventory Control • Maintenance, Installation and Repair • Manufacturing Production Process Development • Production • Quality Assurance
Suggested Elective Courses	<p>Public Speaking, Personal Finance, Exploratory Business, Business Computer Fundamentals, Advanced Studies in Technology, Architecture, Construction Technology, Engineering, Robotics, Technology Lab, Theatre Construction Tech, Commercial Design, World Languages, Career Work Study</p>
Steel Center Career Pathways Options	<p>Automotive Mechanics, Building Trades, Carpentry Electrical Construction, Heating, Air Conditioning & Refrigeration, Medium/Heavy Truck, Welding</p>

Possible Careers	Cabinetmakers and Bench Carpenters, Civil Engineering Technicians, Construction Workers, Electrical and Electronic Engineering Technicians, Elevator Installers and Repairers, Environmental Engineering Technicians, Fence Erectors, Locksmiths and Safe Repairers, Machinists, Millwrights, Nuclear Monitoring Technicians, Roustabouts, Oil and Gas, Telecommunications Line Installers and Repairers, Welders, Cutters, Solderers, Woodworks, and many more
Related Majors	Apparel and Textile Manufacture, Appliance Installation and Repair Technology, Biomedical Technician, Computer Hardware Technology/Technician, Electrical Installation & Repair, Furniture Design and Manufacturing, Heavy/Industrial Equipment Maintenance, Hydraulics and Fluid Power Technology, Laser and Optical Technician, Locksmithing, Occupational Safety and Health Technology, Sheet Metal Technology, Welding Technology, and many more

Marketing

Description	<p>There are many challenging educational and training opportunities within the high-skilled world of Marketing. Learners need a solid background in communication, math and technical skills. Education and training can be obtained in high schools, technical colleges/institutes and universities.</p> <p>Along the way, career guidance professionals assist learners in assessing their educational goals, interests, abilities and skills to facilitate a good match to the cluster's many pathway options. Learners participate in relevant educational opportunities framed in the context of the cluster. They gain knowledge and skills through coordinated workplace learning experiences such as site visits, job shadowing and internships. If they choose, they may achieve valuable skill certifications that lead to employment. Colleges and universities offer advanced degrees and industry certifications that prepare learners for professional and technical careers.</p> <p>This diverse Career Cluster prepares learners for careers in planning, managing and performing marketing activities to reach organizational objectives.</p>
Employment Outlook	<p>According to the latest statistics, there are about 15.3 million jobs in the marketing cluster, one of the largest in terms of jobs. Median annual wages for these occupations range from \$18,960 for cashiers to \$123,220 for marketing managers. Advertising, marketing, promotions, public relations and sales managers hold more than 600,000 jobs. Employment opportunities for retail salespeople are expected to be good. Individuals with a college degree or computer skills will be sought for managerial positions in marketing management, professional sales, merchandising, marketing communications, and marketing research.</p>
Pathways	<ul style="list-style-type: none"> • Marketing Communications • Marketing Management • Marketing Research • Merchandising • Professional Sales
Suggested Elective Courses	<p>Introduction to Public Relations, Public Speaking, Economics, Psychology, Sociology, Statistics and Probability, Accounting I, Accounting II, Accounting III, Exploratory Business, Marketing, Personal Finance, Retail Management, Python - Intro. to Programming, Business Computer Fundamentals, Incubatoredu - Entrepreneurship, Apple Swift Programming, C++, Advanced Placement Computer Science, TJTV, World Languages, Basic Graphic Design, General Art, Mixed Media Arts, Photography/Video Production, AP Art, Creative Studio Media, Career Work Study Program, Commercial Design</p>
Steel Center Career Pathways Options	<p>Advertising and Design</p>
Possible Careers	<p>Advertising and Promotions Managers, Demonstrators and Product Promoters, Interior Designers, Market Research Analysts, Marketing Managers, Real Estate Sales Agents, Sales Representatives, Survey Researchers, Travel Guides, and many more</p>
Related Majors	<p>E-Commerce/Electronic Commerce, Fashion Merchandising, International Marketing, Marketing, Real Estate, Sales, Distribution, and Marketing Operations, and many more</p>

Science, Technology, Engineering and Mathematics

Description	<p>There are many challenging educational and training opportunities within the high-skilled world of Science, Technology, Engineering and Mathematics. Learners need a solid background in math, science and technical skills. Education and training can be obtained in high schools, technical colleges/institutes and universities.</p> <p>Along the way, career guidance professionals assist learners in assessing their educational goals, interests, abilities and skills to facilitate a good match to the cluster's pathway options. Learners participate in relevant educational opportunities framed in the context of the cluster. They gain knowledge and skills through coordinated workplace learning experiences such as site visits, job shadowing and internships. If they choose, they may achieve valuable skill certifications that lead to employment. Colleges and universities offer advanced degrees and industry certifications that prepare learners for professional and technical careers.</p> <p>A career in science, technology, engineering or mathematics is exciting, challenging, and ever-changing. Learners who pursue one of these fields will be involved in planning, managing, and providing scientific research and professional and technical services including laboratory and testing services, and research and development services.</p>
Employment Outlook	<p>There are many challenging educational and training opportunities within the high-skilled world of Science, Technology, Engineering and Mathematics. Learners need a solid background in math, science and technical skills. Education and training can be obtained in high schools, technical colleges/institutes and universities.</p> <p>Along the way, career guidance professionals assist learners in assessing their educational goals, interests, abilities and skills to facilitate a good match to the cluster's pathway options. Learners participate in relevant educational opportunities framed in the context of the cluster. They gain knowledge and skills through coordinated workplace learning experiences such as site visits, job shadowing and internships. If they choose, they may achieve valuable skill certifications that lead to employment. Colleges and universities offer advanced degrees and industry certifications that prepare learners for professional and technical careers.</p> <p>A career in science, technology, engineering or mathematics is exciting, challenging, and ever-changing. Learners who pursue one of these fields will be involved in planning, managing, and providing scientific research and professional and technical services including laboratory and testing services, and research and development services.</p>
Pathways	<ul style="list-style-type: none"> • Engineering and Technology • Science and Mathematics
Suggested Elective Courses	<p>Public Speaking, Anatomy & Physiology, Environmental Science, AP Environmental Science, Introduction to Astronomy, Psychology, Statistics & Probability, Business Computer Fundamentals, Python - Introduction to Programming, Apple Swift Programming, C++, Cyber Forensics, AP Computer Science, Engineering, Robotics, Architecture, Technology Lab, World Languages, Foundations of Health & Safety, Career Work Study</p>
Steel Center Career Pathways Options	<p>Electrical Construction, Health Assistants</p>

Possible Careers	Aerospace Engineers, Architectural and Engineering Managers, Biomedical Engineers, Cost Estimators, Drafters, Economists, Hydrologists, Materials Engineers, Nuclear Technicians, Physics Teachers, Software Developers, Statisticians, and many more
Related Majors	Acoustics, Anatomy, Applied Economics, Biomedical Engineering, Cell Physiology, Construction Engineering, Economics, Engineering Mechanics, Evolutionary Biology, Immunology, Industrial Engineering, Mycology, Nuclear Physics, Petroleum Engineering, Photobiology, Polymer/Plastics Engineering, Statistics, Toxicology, Wildlife Biology, and many more

Transportation, Distribution and Logistics

Description	<p>There are many challenging educational opportunities within the high-skilled world of Transportation, Distribution and Logistics. Students can begin preparing in high school or middle school. Learners need a solid background in communications, math, science and technology.</p> <p>Along the way, career guidance professionals assist students in assessing their educational goals, interests, abilities and skills to ensure a fit to the cluster's many pathway options. Students can participate in coordinated workplace learning experiences such as site visits, job shadowing, and internships. If they choose, they may achieve valuable skill certifications while in high school that lead to employment. Colleges and universities offer advanced degrees and industry certifications that prepare students for entry-level, professional and technical careers.</p> <p>This diverse Career Cluster exposes students to careers and businesses involved in the planning, management, and movement of people, materials, and products by road, air, rail and water. It also includes related professional and technical support services such as infrastructure planning and management, logistics services, and the maintenance of mobile equipment and facilities.</p>
Employment Outlook	<p>Transportation, distribution and logistics is a critical sector of the United States economy. Over 10 million people are employed in transportation or transportation-related occupations. The Bureau of Labor Statistics projects an increase in employment in this sector through 2024. There will be a growing number of career opportunities in a variety of professional and technical occupations as well as high-paid, entry-level occupations that can provide career advancement opportunities. Median annual wages for these occupations range from \$19,500 for parking lot attendants to \$121,280 for air traffic controllers.</p>
Pathways	<ul style="list-style-type: none"> • Facility and Mobile Equipment Maintenance • Health, Safety and Environmental Management • Logistics Planning and Management Services • Sales and Service • Transportation Operations • Transportation Systems, Infrastructure Planning, Management and Regulation • Warehousing and Distribution Center Operations
Suggested Elective Courses	<p>Public Speaking, Environmental Science, AP Environmental Science, Economics, Psychology, Statistics & Probability, Business Computer Fundamentals, Exploratory Business, Construction Technology, Theatre Construction Technology Engineering, Robotics and Drones, Technology Lab, Architecture, World Languages, Adult Living, Career Work Study</p>
Steel Center Career Pathways Options	<p>Automotive Mechanics, Building Trades, Carpentry, Collision Repair and Refinishing, Electrical Construction, Heating, Air Condition, and Refrigeration, Medium/Heavy Truck, Welding</p>
Possible Careers	<p>Air Traffic Controllers, Airline Pilots, Copilots, and Flight Engineers, Commercial Divers, Crane and Tower Operators, Flight Attendants, Occupational Health and Safety Specialists, Production, Planning, and Expediting Clerks, Railroad Brake, Signal, and Switch Operators, Transportation Managers, and many more</p>
Related Majors	<p>Air Traffic Controller, Autobody/Collision Repair, Diesel Mechanics Technology, Mechanic and Repair Technology, Parts, Warehousing, and Inventory Management Operations, Truck Driver/Commercial Vehicle Operation, Vehicle Emissions Inspections & Maintenance Technology, and many more</p>



This document was produced based on the existing Thomas Jefferson High School Program of Studies produced annually by the administration and educators of Thomas Jefferson High School. Attention has been given to ensure the accuracy of this document. Should there be any discrepancies, please refer to the original Thomas Jefferson High School 2025-2026 Program of Studies.