WESTTOWN SCHOOL

UPPER SCHOOL CURRICULUM GUIDE

2023-2024

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UPPER SCHOOL ACADEMIC OFFERINGS

COURSE OFFERINGS BY DEPARTMENT

Westtown School

Upper School Curriculum
2023-24

The Westtown Upper School curriculum challenges students to discover their intellectual strengths and to develop the skills they need to become stewards and leaders of a better world. The core curriculum in ninth and tenth grades is built on yearlong courses in every subject so that students develop a strong foundation. Eleventh and twelfth grade students pursue a variety of courses in areas of their individual strengths, choosing from elective options rich in opportunities for leadership, in designing research and social action projects, written and oral expression, and applied laboratory experiences.

COURSE PLANNING

Planning your curriculum

Returning students work with their advisor, their current teachers, and their parents in mapping out the best combination of courses for the coming year in February and March. As students prepare to enter 10th grade, they complete a Tentative Four-Year Plan, mapping out next year's courses in the context of a possible path for future courses. Department Chairs and Class Deans, also review proposed course plans in the spring term, with additional review of 11th graders' plans by their college counselor. All rising 9th grade and new 10th-12th grade students work with their Class Dean and the Dean of Academics to discuss their choices for courses in April and May. They complete placement tests in June to confirm their choices in math and science. Materials about course planning are posted on MyWesttown Resource Boards.

Recommended Course Load:

9th grade (5.75 credits minimum; 6.25 credits is typical)

English: Perspectives in Literature	**Science:** Physics 1 & Chemistry 1
History: Peace and Justice	**Religion:** Quakerism in Life and Practice
Language: Level 1 or 2	**Health:** Health and Life Skills
Math: Algebra, Geometry or higher	**Art, Computer Programming, Music, or Theater:** Semester elective

10th grade (5.5 credits minimum; 6 credits is typical)

English: American Literature	**Science:** Biology 1 & Biology 2
History: U.S. History	**Religion:** World Religions 1
Language: Level 2 or 3	**Art, Computer Programming, Music, or Theater:** Semester elective
Math: Geometry, Algebra 2 or higher	

11th grade (5 credits minimum; 5.5 is typical)

English: Contemporary World Literature Elective Semester 2	**Science:** Chemistry 2, Physics 2
History: Elective choices	**Religion:** World Religions 2
Language: Level 3 or 4	**Art, Computer Programming, Music, or Theater:** Semester elective
Math: Algebra 2 or higher	**Junior Seminar**

12th grade (5 credits minimum)

English: The Essay Elective Semester 2	**Science:** Upper Level electives
History: Electives	**Religion:** Electives (must take one)
Language: Level 4 or 5	**Art, Music, or Theater**
Math: Precalculus, Functions or higher	**Senior Seminar**

GRADUATION REQUIREMENTS:

Westtown's graduation requirements are purposefully flexible so that a student may concentrate in areas of passionate interest.

Academic Departments	Required Credits
Arts	**1.5 credit**
English	**4 credits**
Health	**.5 credits**
History	**2 credits** *(3 recommended) Peace & Justice and U.S. History required*
Math	**3 credits in grades 9-12** *(4 recommended)*
Religion	**1.75 credits**
Science	**2 credits** *(3 recommended) Physics 1 & 2, Chemistry 1 & 2, Biology 1 & 2*
World Languages	**2 credits in grades 9-12** *(3 years recommended in one language in grades 9-11)*
Co-Curricular activities:	**Every Term: 4 years**
Community Life Boarding Program	**Required Boarding: 11th and 12th grade** *(For students enrolled by grade 7, boarding is optional)*
Experiential Learning & Service	**40 hours Service** *(currently under review)*

CO-CURRICULARS:

INTERSCHOLASTIC ATHLETICS, LIFELONG FITNESS, COLLABORATIVE ACTIVITIES

FALL	WINTER	SPRING
Interscholastic Athletics	**Interscholastic Athletics**	**Interscholastic Athletics**
Cross Country	Basketball	Baseball
Field Hockey	Indoor Track	Golf
Soccer	Rock Climbing	Lacrosse
Tennis	Swimming	Softball
	Wrestling	Tennis
		Track & Field
Lifelong Fitness	**Lifelong Fitness**	**Lifelong Fitness**
Dance	Dance	Tennis Training
Swimming Training	Indoor Field Hockey Training	Morning Fitness
Tennis Training	Lacrosse Training	Yoga
Wrestling Training	Baseball Training	Conditioning Swimming
Basketball Training	Winter Running	
Strength & Conditioning	Strength & Conditioning	Strength & Conditioning
Outdoor Leadership (Adv)	Yoga	Outdoor Leadership
All Interscholastic Athletics	All Interscholastic Athletics	All Interscholastic Athletics
Skateboarding		
Collaborative	**Collaborative**	**Collaborative**
E-Sports	Robotics	E-Sports
Outdoor Leadership (Adv)		Outdoor Leadership
Theater: Fall Play	Theater: Improv	Theater & Dance: Spring Musical
Theater: Scenic Arts Design	Theater: Scenic Arts Design	Theater: Scenic Arts Design
Service Network	Service Network	Service Network
All Interscholastic Training	All Interscholastic Training	All Interscholastic Training
All Interscholastic Athletics	All Interscholastic Athletics	All Interscholastic Athletics
Interscholastic Team Manager	Interscholastic Team Manager	Interscholastic Team Manager
Farming		Farming

CURRICULUM-AT-A-GLANCE:

Arts
1.5 credits

Art
Intro to Studio Art: 2D
Intro to Studio Art: 3D
Ceramics 1, 2, 3 (Adv)
Drawing & Painting 1, 2
Performing Arts Tutorial (Adv)
Photography & Digital Art 1, 2
Sculpture 1, 2
Studio Art Forum (Adv)
Woodworking 1, 2, 3 (Adv)

Music
Choral Arts 1, 2, 3, 4 (Adv)
Jazz Ensemble 1, 2, 3, 4 (Adv)
String Orchestra 1, 2, 3, 4 (Adv)
Symphonic Band 1, 2, 3, 4 (Adv)
From Blues to EDM: Popular Music
Digital Music & Production 1, 2
Intro to Guitar
Applied Music 1, 2, 3 (Adv), 4 (Adv)

Theater
Elements of Theater 1
Storytelling & Performance
Acting Workshop
Theater Arts (Adv)
Performing Arts Tutorial (Adv)

Engineering & Computer Science (electives)

Foundation Courses
Intro to Mechanical Engineering
Intro to Programming
Intro to Studio Art 2D or 3D (Arts)
From Blues to EDM (Arts)

Systems Exploration Courses
Website Development
Dynamic Application Development
Design Engineering

Advanced Application Courses
Design Engineering Solutions 1,2 (Adv)
Computer Science 1 (Adv)
Studio Art Forum (Adv) (Arts)
Math Independent Research (Adv)
Computer Science Indep. Research (Adv)

English
4 credits

Required Courses
Perspectives in Literature (9th)
American Literature (10th)
Contemporary World Literature (11th)
The Essay (12th)
Elective (11th)
Elective (12th)

Electives
Contemporary Award Winning Fiction: What are you Reading? (Adv)
Writing with Power
Dystopian Literature
World Mythology

Health
.5 credits

Required Courses
Health & Life Skills
Junior Seminar
Senior Seminar

History
2 credits

Required Courses
Peace & Justice
U.S. History

Electives
World History 1300-1800
World History 1800-2000
Microeconomics
Macroeconomics
Gender & Queer Studies
Contemporary Affairs
Modern Latin America
Latinx-American Experience
Genocide Studies 1: Holocaust and Armenian Genocide
Genocide Studies 2: Cambodian, Rwanda, Bosnian, and Indigenous Peoples Genocide

Math
3 credits

Required Courses
Algebra 1
Geometry
Algebra 2 or Algebra 2 & Trigonometry

Recommended for all
Precalculus or Functions with Math Modeling

Electives
Calculus 1
Calculus 2 (Adv)
Statistics
Linear Algebra (Adv)
Multivariable Calculus (Adv)

Religion
1.75 credits

Required Courses
Quakerism in Life & Practice
World Religions 1
World Religions 2

Electives (required to take one)
Environmental Justice
Ethics & Philosophy
Gender, Sexuality & World Religions
Building the Beloved Community

Science
2 credits

Required Courses
Physics 1
Chemistry 1
Biology 1 & Biology 2

Recommended for all
Physics 2
Chemistry 2

Biology Electives
Anatomy & Physiology (Adv)
Molecular Biology (Adv)
Biology of Disease
Bioethics

Research
Scientific Research (Adv)

Chemistry Electives
Chemical Reactions (Adv)
Zoology & Biochemistry of Animals
Applied Chemistry

Environmental Science Electives
Environmental Science 1, 2

Physics Electives
Electricity & Magnetism (Adv)
Modern Physics (Adv)
Astronomy

World & Classical Languages
2 credits

Required Courses
Through at least level 2 of the same language in grades 9-10: choose Chinese, Latin, or Spanish

Recommended
Through at least level 3: Chinese, French, Latin, or Spanish 3, 4 (Adv), 5 (Adv)

COURSE OFFERINGS BY DEPARTMENT

ARTS

Students are required to complete three half-credit classes in the arts.

Department Philosophy

We believe that every student possesses a unique artistic voice. The arts faculty challenge students to find new ways to look at the world around them as they develop skills that apply to both their specific art form and to every aspect of their lives. Through a focus on encouraging a student's unique voice and centered on collaboration and creative process, the program aims to serve the student artist of every skill level with a focus on creative process, personal expression, innovation, and risk-taking as we educate a new generation of artists, leaders, and changemakers who are creative, collaborative, and empathetic.

Students will have the following experiences in the Arts curriculum:

- Develop ability to take responsibility for designing processes, problem solving, organizing, and holding themselves accountable in the creative process
- A learning environment that fosters taking risks and to learn by doing
- An introduction to design thinking in Drawing, Vectorworks, Sculpture, and Woodworking that partners well with students pursuing interests engineering and architecture
- A capstone experience in both Visual Arts and Performing Arts that puts student-directed advanced study at the center of the curriculum
- A broad variety of opportunities for performance and community sharing of students' work

Arts Required Courses	
Level 1 courses—select one	
Intro to Studio Art: 2D	Choral Arts 1
Intro to Studio Art: 3D	String Orchestra 1
Intro to Guitar	Symphonic Band 1
Elements of Theater 1	From Blues to EDM
Storytelling and Performance	
Electives—Required two additional half credits	
Intro to Studio Art: 2D	Choral Arts 1, 2, 3, 4 (Advanced)
Intro to Studio Art: 3D	String Orchestra 1, 2, 3, 4 (Advanced)
Drawing & Painting 1, 2	Symphonic Band 1, 2, 3, 4 (Advanced)
Photography & Digital Art 1, 2	Jazz Ensemble 1, 2, 3, 4 (Advanced)
Ceramics 1, 2, 3 (Advanced	From Blues to EDM
Sculpture 1, 2	Digital Music 1, 2
Woodworking 1, 2, 3 (Advanced)	Intro to Guitar
Studio Art Forum (Advanced)	
Elements of Theater 1	
Storytelling & Performance	
Acting Workshop	
Theater Arts (Advanced)	
Performing Arts Tutorial (Advanced)	

Theater

Elements of Theater
Grades 9-12
This foundational course provides students with an introduction to theater arts. Through a series of creative projects and seminar-style discussions, this course examines the major elements of theater including: acting, directing, design, dramatic literature, and history through the reading of plays. Students will explore the breadth of theater elements from the perspective of the practitioner, collaborator, and arts advocate. This course does not require students to perform. (½ credit)

Storytelling and Performance
Grades 9-12
At its core, theater is about using one's body, voice, imagination, and experience to tell a story. As Anna Deavere-Smith notes, the craft of storytelling in the theater is a humanizing force—it facilitates creative, empathetic, and evocative connections between people; or, to put it another way, it creates a table for us to sit together. At a time where polarization is incentivized through the limited communicative means of social media, this course is a multilayered theater education experience. First, students will learn the foundations of performance through the expression of their own story. Second, students will learn the craft of oration, performative expression, and artful listening. Third, students will be enriched and educated by the stories of their peers, activating Westtown's vibrant, intersectional diversity. Students will learn that part of the art of storytelling is the craft of listening. This course will utilize alternative concepts of rigor and de-emphasize written assessments but will instead focus on verbal communication and oration techniques. The final assessment for this course will be a Story Slam performance for the entire Westtown community and an internal community podcast. (½ credit)

Acting Workshop
Grades 10-12
In this course, students learn how to read and analyze a script from the actor's point of view. Students present scenes from classical and modern theater. Ensemble technique is the foundation of the curriculum. We will also read and/or discuss concepts by Konstantin Stanislavski, Uta Hagen, Stella Adler, John Barton, and Kristin Linklater among others. Students are evaluated on degree of effort, quality of preparation for scene studies, commitment to the ensemble, willingness to engage in peer-to-peer critique, and ability to implement feedback. (½ credit)
Prerequisite: Elements of Theater, Storytelling and Performance, or permission of department

Theater Arts (Advanced)
Grades 11-12
This upper-level course allows advanced theater arts students to use their individual creative lens to explore theater arts with depth and breadth as both scholars and practitioners. Students will spend half the semester studying a particular topic in theater arts. In the second half of the semester, the students will collaborate on the creation of a new theater performance. For the upcoming academic year, the topic will be Theater Design and Technology. Previous topics have included Audition Technique, Theater and Social Change, Creative Producing and Devising, Documentary Theater or Verbatim Theater, and Musical Theater. (½ credit)
Prerequisite: Elements of Theater, Storytelling and Performance, Acting Workshop, or permission of department

Performing Arts Tutorial (Advanced)
Grade 12
A tutorial-style course open to advanced theater and music students in their senior year. The tutorial will be crafted to the needs of the upper-level student but may cover a variety of areas and subjects including: theater history, theater criticism, directing, film-making, audition or portfolio preparation, advanced music theory, music, musical theater performance, acting styles, digital music composition, or other topics or

combination of topics pertinent to the individual student. Intended for students interested in continuing their study in college or an advanced performing artist looking to round out their arts education. (½ credit)
Prerequisite: Theater Arts (Advanced), Acting Workshop, or permission of the department

Music

Choral Arts 1, 2, 3, 4 (Advanced)
Grades 9-12
Choral Arts is a mixed vocal ensemble open to all. Prior vocal and musical training is not required. Repertoire includes choral literature in various periods, cultures, styles, and languages. Through the repertoire, students develop their musical and technical proficiency as singers as well as how to be an effective and contributing member of the ensemble.This course also includes training in sight singing and theory. The ensemble performs several times a year for the school community as well as the greater community. (½ credit)

Jazz Ensemble 1, 2, 3, 4 (Advanced)
Grades 10-12
Students will learn to play in a variety of jazz styles as well as develop instrument-specific techniques that will enhance their musical and technical proficiency. This course is centered on improvisational skills development, a core element of the jazz idiom. In addition, topical explorations centered on aesthetic philosophy, performance critiques, and Western music theory are an essential part of the curriculum.This combination encourages students to become effective and contributing jazz ensemble musicians, confident improvisers, hone skills on their individual instrument, sharpen their critique skills, deepen their understanding of musical form and function, and unpack meaning in music and performance. Performances include regularly scheduled concerts as well as a number of special events on and off campus. (½ credit)
Prerequisite: One year of Upper School large ensemble experience for wind and brass players. Interested guitar, piano, bass, or set students need to obtain permission from the instructor. Auditions are required.

String Orchestra 1, 2, 3, 4 (Advanced)
Grades 9-12
Students in String Orchestra will continue their investment in their musical development and technical proficiency on their stringed instrument through concert repertoire in a variety of styles and time periods. In addition, topical explorations centered on aesthetic philosophy, performance critiques, and Western music theory are an essential part of the curriculum. This combination encourages students to become effective and contributing ensemble musicians, hone skills on their individual instrument, sharpen their critique skills, deepen their understanding of musical form and function, and unpack meaning in music and performance. Performances include regularly scheduled concerts as well as additional off-campus concerts. Auditions are held for placement, but not for acceptance, into the ensemble. (½ credit)
Prerequisite: At least three years of previous experience on a string instrument or permission from the instructor

Symphonic Band 1, 2, 3, 4 (Advanced)
Grades 9-12
Students in Symphonic Band will continue their investment in their musical development and technical proficiency on their instrument through concert repertoire in a variety of styles and time periods. In addition, topical explorations centered on aesthetic philosophy, performance critiques, and Western music theory are an essential part of the curriculum. This combination encourages students to become effective and contributing ensemble musicians, hone skills on their individual instrument, sharpen their critique skills, deepen their understanding of musical form and function, and unpack meaning in music and

performance. Performances include regularly scheduled concerts as well as additional off-campus concerts. Auditions are held for placement, but not for acceptance, into the ensemble. (½ credit)

Prerequisite: At least three years of previous lessons or ensemble experience on a woodwind, brass, or percussion instrument or permission from the instructor

Introduction to Guitar
Grades 9-12
This course is designed for the beginning or novice guitar player. Students will learn how to care for the instrument, how to read music notation, tabs, chords, learn basic Western music theory, play in myriad styles, learn to improvise, and will compose music both collaboratively and individually. By the end of the course, students will have a working knowledge of the guitar and will be prepared to continue to learn and compose songs in whatever style appeals to them. (½ credit)

From Blues to EDM: Popular Music in American Culture
Grades 9-12
This course explores the popular music of the United States, considering the influence of non-European cultures and the resulting American musical styles. Through the exploration of Hip Hop, Blues, EDM, Rock, and Pop, the course will give students a chance to create music and examine the impact of these styles worldwide. Students will compose music using the basic features of a Digital Audio Workstation. (½ credit)

Digital Music and Studio Production 1
Grades 10-12
This course exposes students to more advanced features of audio production and recording. This course will focus on technological literacy and proficiency, digital recording, composition, and critical response. Students will become proficient manipulating MIDI and audio files. Students will create original musical compositions using the basic tools, media, and techniques in music technology. Basic theory and piano skills will be explored. (½ credit)
Prerequisite: From Blues to EDM: Popular Music in American Culture

Digital Music and Studio Production 2
Grades 10-12
This course allows students to challenge themselves by designing and then creating their own musical compositions. Each student creates 'recipes' for the works they hope to create. In their planning, students identify the specific techniques and skills they wish to explore and hone over the creative process of making their art work a reality. Students submit periodic draft recordings of their works as stepping stones to their finished compositions. (½ credit)
Prerequisite: Digital Music and Studio Production 1

Performing Arts Tutorial: Music (Advanced)
Grade 12
A tutorial-style course open to advanced theater and music students in their senior year. The tutorial will be crafted to the needs of the upper-level student but may cover a variety of areas and subjects including: music theory, songwriting, criticism, audition or portfolio preparation, or other topics or combination of topics pertinent to the individual student. Intended for students interested in continuing their study in college or an advanced performing artist looking to round out their arts education. (½ credit)
Prerequisite: Permission of the department

Applied Music 1, 2, 3, 4 (Advanced)
Grades 9-12
Westtown School keeps a roster of professional music instructors to teach on-campus students during the daytime or evening study halls. All have extensive experience teaching music as well as performing, from simple concert work to solos with some of the greatest symphony orchestras in the world. We offer lessons in many styles of music and will work to find additional instructors to meet student needs. (½ credit)
Students take lessons for credit, but will not be able to apply this to their arts requirement. Students must complete 30 lessons per year. Requires a fee paid to the private teacher.

VISUAL ART

Introduction to Studio Art: 2D
Grades 9-12
This foundational course provides students with an introduction to two-dimensional media including drawing, collage, and digital mediums. Emphasis is placed on the understanding and application of the artistic process while learning how to conceptualize and evaluate works of art. Students will be given an opportunity to experiment with materials, techniques, and principles that are central to two-dimensional artmaking. Students will explore drawing using graphite, charcoal, and ink, and will become acquainted with the fundamentals of collage and photography. In this work, students will develop their knowledge of visual thinking and technical application. (½ credit)

Introduction to Studio Art: 3D
Grades 9-12
This foundational course provides students with an introduction to three-dimensional art including concepts and structures. Students will experiment with techniques, tools, processes, texts, and media in order to generate new expressive possibilities. They will work with materials such as found objects, wood, paper, clay, and plaster, exploring how they can be used to create objects that address new concepts or narratives. The class incorporates discussion, feedback, and critique in order to support artmaking. (½ credit)

Drawing and Painting 1, 2
Grades 10-12
This one-semester course provides students with the opportunity to balance technical skill development in drawing and painting with self-expression. Emphasis will be on developing the student's artistic process and voice through a wide range of projects that allow for individual expression of ideas, many of which will focus on conceptual content. Students will gain familiarity with traditional drawing media, watercolor and acrylic paints, and be exposed to more experimental mixed media approaches to artmaking. Students will gain more independence in their artmaking and begin building a portfolio of quality work. Projects will alternate annually. (½ credit)
Prerequisite for Drawing and Painting: Introduction to Studio Art: 2D
Prerequisite to Drawing and Painting 2: Drawing and Painting 1

Ceramics 1, 2, 3
Grades 10-12
Ceramics will explore the basic technical skills of working with clay, both hand building and using a potter's wheel. Emphasis is placed on developing structures and surface designs that are well crafted and finished appropriately. The beginning students are encouraged to experiment with a broad range of techniques and concepts. Students will begin to narrow their craft to develop an individual artistic voice and create forms that demonstrate an understanding of volume, surface, and function. Students will learn the foundations of the material, healthy studio practices, and will gain familiarity with ceramics equipment. (½ credit)
Prerequisite for Ceramics 1: Introduction to Studio Art: 2D or 3D or by department approval

Photography and Digital Art 1, 2
Grades 10-12
This one-semester course allows students to refine image-making skills through sustained work in photography and digital programs. Students will work with digital cameras to study operation, composition, light, and mixed media techniques. Learners will be introduced to more experimental manipulation through the Adobe Creative Suite, allowing the computer to be used as a dynamic design tool. Students will study the traditional and contemporary applications of photography, video, and digital art, and will consider the aesthetic and social concerns inherent in the mediums. Students will produce a range of work that will further develop the breadth of their growing art portfolios. Projects will alternate annually. (½ credit)
Prerequisite for Photography and Digital Art 1: Introduction to Studio Art: 2D or 3D
Prerequisite for Photography and Digital Art 2: Photography and Digital Art 1

Sculpture 1, 2
Grades 10-12
In this course, students will consider and explore the use of 3D materials and processes to best convey their concept and intent to demonstrate strong technical skill and precision. Through their experimentation, they will establish connections between materials, processes, and ideas to and demonstrate synthesis. Students will explore traditional materials such as papier mache, plaster, cardboard, and found objects, and may be introduced to installation, time-based art, performance, or video. Projects will alternate annually. (½ credit)
Prerequisite for Sculpture: Introduction to Studio Art: 2D or 3D or by department approval

Woodworking 1, 2, 3 (Advanced)
Grades 10-12
Students will explore and experiment with a variety of techniques for working wood, each culminating in a specific finished product such as a spoon, cutting board, box, shelf, stool, or table. Students will develop a sense of wood's possibilities and limits as they make projects straight and curvy, and learn a range of traditional woodworking joints such as the housed dado and the dovetail. Measurement and precision will be important as they start with hand tools and progress over the course to familiarity with a number of power tools, including the table saw and the lathe. Whenever possible, students will be free to design and build the project of their choice. Second- and third-year students will have considerably more freedom to design their projects, as well as being introduced to more advanced techniques and meeting higher standards of independence, planning, and successful closure. (½ credit)
Prerequisite for Woodworking 1: Introduction to Studio Art: 2D or 3D or by department approval

Studio Art Forum (Advanced)
Grade 12
This capstone course for the visual art student is a summative experience that brings together students from all visual arts disciplines—drawing and painting, photography and digital art, sculpture, ceramics, and woodworking—to work as practicing artists building their own assignments, working in series, and defending their works. Emphasis is placed on the creation of a body of art at a level that is not only technically skillful but also exhibits significant intellectual and emotional engagement and expresses a student's own vision and style. Assignments will be given throughout the fall that will help students to hone their focus and gain experience in designing their own prompts. In the winter and spring, students will develop a series of works that demonstrates sustained investigation of a specific visual idea. (1 credit)
Prerequisite: Senior year. Permission of the department is required.

Co-Curricular Performing Arts Opportunities

These opportunities can be used to fulfill one season of the co-curricular requirement in 9th and 10th grade, and two seasons in 11th and 12th grade. Students with exceptional interest in the arts can apply for an additional season each year. Rehearsals take place every day after school and some weekends.

Fall Theater: Students can participate as actors, stage managers, and assistant directors in the creation of a fully realized production, working with diverse source material including contemporary texts, Shakespeare, and world-premiere plays commissioned by Westtown. Recent productions include an original adaptation of *Twelfth Night*, *The Caretaker* —a new play commissioned for Westtown by Noelle Viñas, Charles Mee's *Big Love*, Tectonic Theater Project's *Laramie Project*, Qui Nguyen's *She Kills Monsters*, and Naomi Iizuka's *Anon(ymous)* as well as original work and devised productions. The rehearsal process focuses on the value of collaboration, ensemble building, personal challenge, and problem solving.

Winter Improvisation: Students will learn the basics of improv and apply them to learning how to do grounded scene work, how to play and refine a range of characters, how to heighten a scene and work on comedic timing, and how to create art collaboratively. We will focus on teamwork, creativity, how to be present when you are on stage, and create pieces that have never been seen before and that exist in the moment.

Spring Musical: Students can participate as actors, dancers, pit musicians, stage managers, and assistant directors in a fully realized musical production. Show selections rotate between: canonical/standard musicals, new works, multi-generational pieces, and musical revues. Recent productions include *Broadway Our Way*, *Zombie Prom, Rent*, *Pippin*, *Fiddler on the Roof*, *Into the Woods*, *21 Chump Street*, and *20th Annual Putnam County Spelling Bee*. The rehearsal process focuses on the important role of problem-solving and personal challenge. There is an emphasis on collaboration as we bring the varied areas of performing arts together to create a new and unique product.

Fall/Winter/Spring Dance: Each season, students work collaboratively in the creation of a dance concert. The dance program provides challenges and opportunities for students to practice setting goals, overcoming obstacles, and building life skills such as communication, conflict resolution, and decision-making. A strong focus on dance technique and body mechanics support explorations in performance, composition, history and culture, and analyzing and critiquing. Students who wish to participate in the spring dance season can audition to be a part of the spring musical. All experience levels of dancers are encouraged to enroll.

Scenic Arts Design: Every season students in Scenic Arts Design collaborate on the behind-the-scenes work of our theater productions. These elements include but are not limited to: design, construction, engineering, and creative process. Students will have the opportunity to concentrate on several disciplines: scenery, props, paint, lighting, audio, and costumes. Advanced students may be given design or backstage crew opportunities.

Musical Performance Opportunities

Each year, the Performing Arts Department stages a variety of music performances including:

- The Meeting House Spring Concert (Orchestra, Chorus)
- The Spring Band Concert (Symphonic Band, Jazz Band)
- The Solo Recital Series

Extra-Curricular Opportunities

There are a variety of opportunities for student participation in the arts outside of the academic and co-curricular program, including:

- Elements Dance Ensemble
- Light and Audio Design
- Costume and Make-up Design
- Drama Club
- Pit Orchestra

ENGINEERING and COMPUTER SCIENCE

Engineering and Computer Science provides elective opportunities to explore experiences across a number of departments in computer programming and systems development, as well as skills needed in engineering and design in order to support creating both physical and digital solutions for future projects.

Program Focus:

Students who have interests in engineering, computer science, and designing for change can choose among a variety of courses focused on these areas. This program provides broad opportunities for students to learn and practice the skills needed to understand, use, and build new and future engineering and computer science technologies. Some students will build physical machines or devices; some students will design and craft integrated software solutions; some students will learn how to plan and organize initiatives to seek change. Students taking computer science courses must use either Windows or Mac operating system laptops; Chromebooks do not meet the technical requirements for these classes. All

courses are semester length unless otherwise noted. The overall focus of the program is to provide technological and leadership skills to envision, design, create, and implement solutions to problems that matter.

FOUNDATION SKILLS: **Establish skills to support your work in engineering and computer science**	
Introduction to Programming: Building with Software Introduction to Mechanical Engineering: Tools & Fabrication Introduction to Studio Art: 2D or 3D From Blues to EDM: Popular Music in American Culture	
SYSTEMS EXPLORATION: **Expand skills and gain experiences in context**	
Web Development Dynamic Application Development Design Engineering	
ADVANCED APPLICATIONS: **Design and deliver solutions that matter**	
Design Engineering Solutions 1, 2 (Advanced) Computer Science 1 (Advanced) Studio Art Forum (Advanced) Computer Science Independent Research (Advanced) Math Independent Research (Advanced)	
INTERDISCIPLINARY CREATIVITY: **Complementary skills and experiences**	
Data-Driven Change Certificate Program Drawing & Painting 1, 2 Photography and Digital Art 1,2 Sculpture 1, 2 Ceramics 1, 2	Theater Design (Scenic Arts Design “SAD”- co-curricular) Lighting & Sound Design (LAD - club) Robotics (co-curricular or weekend seminar program) Woodworking 1, 2 Digital Music and Studio Production 1, 2

Course Descriptions:

Complete course descriptions are posted in the departments as listed below.

Foundation courses:

- **Science**: Intro to Mechanical Engineering
- **Math**: Intro to Programming
- **Arts**: Intro to Studio Art 2D, Intro to Studio Art 3D, From Blues to EDM

Systems exploration:

- **Science:** Design Engineering
- **Math:** Web Development, Dynamic Application Development

Advanced Applications:

- **Science:** Design Engineering Solutions 1, 2 (Advanced); Electricity and Magnetism Advanced), Modern Physics (Advanced), Chemical Reactions (Advanced), Chemical Bonding (Advanced)
- **Math:** Computer Science 1 (Advanced), Computer Science Independent Research, Math Independent Research, Statistics
- **Arts:** Studio Art Forum (Advanced)

Interdisciplinary Creativity:

- Arts: Drawing and Painting 1, 2, Photography and Digital Art 1, 2; Sculpture 1, 2 *;* Woodworking 1, 2; Digital Music and Studio Production 1, 2

***Co-curricular options*:**

- **Scenic Arts Design** - "SAD" is an after-school co-curricular program that works with the Upper and Middle School Theater programs. Students work collaboratively to design, engineer, build, paint, and sew costumes, scenery, and props for Upper and Middle School productions.

- **Lighting and Audio Design** - "LAD" is a club that supports the Performing Arts (Theater, Music, and Dance) as well as other campus events that need audio and/or lighting support. Students do hands-on work with lighting and sound equipment and learn how to program and edit with the lighting and audio system. Students are encouraged to help create both lighting and sound design.

- **Robotics (FIRST Robotics Team) -** The Westtown robotics team is part of **FIRST** (***For Inspiration and Recognition of Science and Technology***), an organization which creates a dynamic link between science and technology. The Westtown team— number 1391, the Metal Moose— develops students' skill sets in programming, CAD, sensor integration, design/build engineering, business strategic planning, communications and marketing, graphic design, and social outreach. The robotics team works on real-world applications of science and technology, both within the framework of FIRST and in independent projects during the off-season.

ENGLISH

Students are required to complete four credits of English.

Department Philosophy

We believe that the study of literature and composition fosters empathy. Our courses challenge students to develop their own thoughts and beliefs, to become aware of the perspectives of others, and to extend their awareness of broader social issues. Further, we encourage students to reject simplistic answers for the sake of resolution, and encourage students to pursue sophisticated understanding through close reading and critical thinking. English classes emphasize literary analysis and expository and creative writing, helping students become strong critical thinkers and persuasive communicators.

Students will have the following essential experiences in the English curriculum:

- Confident writing voice: each student will develop a strong writing voice in the writing program
- Presentation and class leadership curriculum: students lead classes, facilitate discussion, and make formal presentations at every level
- Critical feedback development: students give and receive critical feedback on writing, learning how to deliver constructive criticism and how to use feedback effectively
- Process-centered approach to writing and drafting, employing collaborative feedback to benefit both the writer and the editor
- Seminar-style classes which encourage engagement and active participation
- 12th grade Personal Research Essay: students write an extended, researched, personal essay with an annotated bibliography and paper abstract

English Required Courses
Perspectives in Literature American Literature Contemporary World Literature The Essay
Electives 2023-2024 **Required: one course in 11th grade and 12th grade of Semester 2**
Contemporary Award Winning Fiction (Adv) Dystopian Literature* World Mythology* Writing with Power* *Regular and advanced option available

(11th and 12th grade students are required to take one elective in the second semester of 11th and 12th grade to complete their English requirement.)

Course Descriptions:

Perspectives in Literature (English 9)
Grade 9
What does it mean to be an outsider? What voices do we hear regularly in our reading? Why? How do these voices/perspectives affect your view of yourself and the world around you? How does embracing otherness help to promote and support peace and justice in the world? This course introduces students to skills essential for the study of literature and critical thinking using canonical and contemporary texts. The course explores the issues of identity, power, and privilege. Students sharpen their critical thinking skills by discussing the works they read, and practice writing about these works through a variety of modes. While special attention is given to developing strong expository writing skills, students also respond to literature in many ways, such as free writing, small-group presentations, and creative assignments. Students further strengthen their writing through regular skill development in grammar/mechanics and vocabulary. (1 credit)

American Literature (English 10)
Grade 10
This course challenges students to examine what it means to be American and what is and should be considered as American Literature. Building on their foundational skills in literary analysis, students practice analyzing authors' choices and techniques and learn how language contributes both literally and figuratively to the meaning of a work. Through student-centered and student-led discussions, students practice approaching literature insightfully and critically and learn to draw connections between the themes and ideas presented. Using various written and oral assignments, students further develop their ability to articulate their insights and arguments clearly and effectively. Regular oral and written reflections encourage students to consider what they have read and discussed, and to use course materials to evaluate and refine their own views and their perceptions of the world around them. Students continue their growth as readers, writers, thinkers, and speakers in this course, which centers its study on American culture, literature, and media. (1 credit)

Contemporary World Literature: World In Motion
Grade 11
This course brings together literature, discussion, and reflective writing to compose a new worldview beyond American interests. Engaging contemporary stories from across the non-Western world, the course seeks to foster empathetic global citizenship through exposure to diverse voices and media of storytelling. The course's three key objectives include: (1) decentralizing American and Eurocentric perspectives, (2) striving for representation amongst students in a multicultural classroom, and (3) empowering students to use their knowledge to become curious and compassionate storytellers themselves. Major assignments include literary analysis essays, creative projects, as well as student-guided discussion of the reading. (½ credit)

The Essay
Grade 12
Students arrive in The Essay with a lot of experience in the analytical essay. This course targets two writing areas where they have less experience: the personal essay and the research essay. Students begin the course with the study of essays by classic and contemporary authors. Their first assignments use a variety of models and approaches to broaden their communication styles and abilities. This deeper understanding is put to good use as the class then focuses on the college essay. In the second quarter, students turn to a research project which includes an annotated bibliography. Students work closely with our librarians to discuss best practices in research, to learn how to use the library's various online databases, to discern what are reliable and credible sources, and to understand proper annotation and citation for their papers. Parallel reading of, writing about, and presenting on student-selected texts rounds out the course content. (½ credit)

11th and 12th grade English Electives: Semester 2

All 11th and 12th grade students complete the second semester of English in an elective English course. Ninth and 10th grade students with a passion for literature may request department permission to add an elective to their program in the spring semester if they have earned a grade of 90.

Writing with Power (with Advanced option)
Grades 11-12
This class gives students an opportunity to explore new modes of writing and communication in multimedia environments. Through the study of journalism across multiple platforms, students will create articles, broadcasts, podcasts, and self-published magazines. Throughout the semester, students are expected to follow major news stories in local, national, and international news. Students are challenged to parse and evaluate the quality and validity of the content they consume.

The course begins with the tenets of journalistic writing. Students learn the inverted pyramid writing process as they create breaking-news-style articles. From there, students will get a taste for essential visual communication techniques as they write, edit, and produce their own broadcast-style segments. The semester will conclude with an exploration of auditory and photojournalism; students will create podcast episodes and self-published photo-centric 'zines. (½ credit)

World Mythology (with Advanced option)
Grades 11-12
"How I make sense of the world is to turn it into myth and fable...Turning people and things into characters... I think that's how I process everything."- Florence Welch (Florence and the Machine)

This class explores myths and folklore from a variety of cultures around the world. We will begin with some discussion of what constitutes mythology and folklore and get a grounding in some of the scholarship that will support ideas of the course. We will then look at some myths in depth, at times choosing to look at modern retellings of older stories as we discover what wisdom these stories hold for us today. Assignments will ask you to be analytical and creative as you respond to these stories. (½ credit)

Dystopian Literature (with Advanced option)
Grades 11-12
Good science fiction authors use their genre to free their characters and societies from material reality as a means to explore questions of human nature, gender/sexuality, religion, and government. The course begins with an introduction to a variety of views of utopias, then explores classic and contemporary examples from the genre—novels and short stories—to consider the causes, messages, and meanings of the dystopian societies they portray. We will read works by authors like Octavia Butler, Margaret Atwood, and others who have made significant contributions to the genre and to our social consciousness. Students will also choose an author or a selection of books to read on their own and present to the class through the term. (½ credit)

Contemporary Award Winning Fiction: What are you Reading (Adv)
Grades 11-12
This course will look at the current and most recent award-winning books from among the Pulitzer Prize (fiction, drama, poetry); The Booker Prize/International Booker Prize; and the Women's Prize for Fiction and others. Essential questions will aim to unpack the impact of calling a text "award-winning" and consider how this naming/criteria affects to what extent the text speaks to or about a particular idea, identity, or narrative in the literary community. Through discussion and thorough research of reviews and industry's reception of the texts, students will consider the various criteria of the awards, the award industry in general, and the ramification of awards; how does the award industry mirror, challenge, or obfuscate work in equity, justice, and belonging? (½ credit)
Requirement for advanced: Strong performance in the previous year's English courses and departmental approval. Requests for enrollment in the course should be made in writing to the department chair. Qualifying seniors will be given priority for enrollment in this course.

ENGLISH LANGUAGE SUPPORT FOR INTERNATIONAL STUDENTS ENGLISH LANGUAGE LEARNERS
All international students and English Learners (ELs) take our core English courses (Perspectives in Literature, American Literature, Contemporary World Literature, The Essay, and core electives). Based on a variety of in-house and external measures, some international students may be offered support through the English Language Learner Team (ELL Team). All students have access to the Learning Center resources, regardless of nationality or language background.

The English Language Learner Team (ELL Team) is a team of teachers with expertise in language learning and literacy skills designed to provide support to students for whom English is not their primary language. ELL faculty use TOEFL or Duolingo scores, in-person interviews, writing samples, and teacher recommendations to help craft a specific curriculum designed to meet the student's needs for support in reading, writing, listening comprehension, and speaking in English. (*This is not a course for credit, nor listed on student transcripts; this is opt-in support, scheduled either individually or in small groups.*)

HEALTH & LIFE SKILLS and SEMINARS

Ninth grade students must take Health and Life Skills. Eleventh grade students are required to take Junior Seminar. Twelfth grade students are required to take Senior Seminar.

Department Philosophy

The Health and Life Skills Department strives to teach students what is meant by wellness and how to maintain a healthy lifestyle. The curriculum helps students develop fundamental life skills to help them sustain and enjoy their life's journey. The Health and Life Skills teachers speak with students honestly and sincerely about their physical, emotional, and spiritual being. Health classes are factual as well as philosophical and help students develop skills for healthy decision-making with regard to their own wellness.

Health Required Courses
Health and Life Skills Junior Seminar Senior Seminar

Course Descriptions:

Health and Life Skills
Grade 9
This course is designed to challenge students to take direct responsibility for their own health through discussion, group activities, and projects. The curriculum includes study in the areas of nutrition, mental health, drugs, sexuality, and life skills issues such as self-esteem, decision-making, communication, and stress management. (½ credit)

Junior Seminar
Grade 11
During the first semester, students will focus on health and wellness. Topics include relationships, consent, drugs, nutrition, sexuality, sleep, and stress management. Students have the opportunity to learn updated information, engage in discussions and watch educational films on various topics. Meeting weekly during the second semester of the junior year, this course provides small-group instruction in self-assessment, organization, and research skill development as it applies to the college search and application process. Students complete several reflective assignments, learn how to research colleges, and start their college essays and the Common Application. This course complements individual meetings between each junior and their assigned college counselor. College fair opportunities are available as well as an interviewing workshop with visiting college admission professionals.

Senior Seminar
Grade 12
This yearlong interdisciplinary course meets weekly. The first half of the year supports the college application process: organization, application essays, obtaining recommendations, completing forms, communicating with college admission professionals, and applying for merit scholarships and financial aid. In the second half of the year, the focus changes to health and wellness. Students will learn how to perform CPR, AED and First Aid to infants, children and adults. The last part of the semester, topics include sleep and stress management.

HISTORY

Students are required to complete two credits in history, including U.S. History. Most students complete at least three history courses before graduation.

Department Philosophy

The History Department believes we study the past to understand and shape the present. Using a process that includes examining evidence and experience, discussion, and interpretation, the history curriculum exposes students to both western and non-western historical traditions while grounding them in the history of the United States. Courses embody the values and mission of Westtown School by fostering in students a deepening sense of civic understanding, involvement, and social activism. In addition, the lens of history is viewed with attention to including and highlighting diverse perspectives that are foundational to developing an inclusive, anti-racist society.

The history curriculum includes the following core experiences:

- Simulations and debates in which students articulate a critical stance on an issue of civic importance
- Careful analysis of primary and secondary texts, with emphasis on the historical essay and thesis-driven writing
- Peace and Justice Social Action Project in grades 9 or 10 blends research and action, challenging students to consider their role in creating a society that is equitable and just
- U.S. History includes a Personal Histories Project that switches the lens of history to cover WWII inclusive of gender, race, and socioeconomic status
- Research projects and presentations, required in grades 11 and 12, prepare students to develop the analytical skills and persuasive practice to propose solutions to significant challenges in the world.
- Semester-length electives incorporate contemporary issues including in-depth exploration of economic, sustainability and racial justice topics.

History Required Courses
Peace and Justice US History * *Advanced Option Available
Electives 2023-24 **Required: one course in 11th grade and 12th grade of Semester 2**
Contemporary Affairs* Modern Latin America* Latin American Experiences* Genocide Studies 1 (Holocaust and Armenian Genocide)* Genocide Studies 2 (Cambodian, Rwanda, Bosnia, Indigenous)* World History 1300 - 1800* World History 1800 - 2000* Microeconomics - Macroeconomics Gender & Queer Studies* *Advanced Option Available

Course Descriptions:

Peace and Justice
Grades 9-10

This course examines historic and present-day human rights injustices in the United States through the lens of identity, privilege, and power. Current events, primary and secondary sources, and films make up the material for the course, and these highlight voices, perspectives, and events that are often marginalized or omitted from mainstream accounts. Classroom activities include role play, presentations, case studies, debates, small-group work, as well as whole-group discussion. Students will develop their skills in reading, writing, critical thinking, and discussing ideas from many perspectives. (1 credit) ***Required for all 9th grade and new 10th grade students***

U.S. History
Grades 10-12

This course is a unit-based examination of United States history, beginning with the pre-colonial Indigenous period and moving forward chronologically to the modern era. A wide variety of course readings, including primary and secondary sources, are incorporated into the curriculum. Projects, written work, library research, and class presentations are used to help nurture skills fundamental to studying U.S. History. Teachers use a variety of teaching methods with an emphasis on discussing historic structural inequities throughout U.S. History. There is also emphasis on linking the past to the present.
(1 credit) ***U.S. History is a graduation requirement***

U.S. History (Advanced)
Grades 10-12
In this writing-intensive course, there is an Advanced-Placement-level textbook and added emphasis on mastery of content, both verbally and in writing. There are a variety of additional accompanying texts. Curriculum is divided into units which typically conclude with a writing assignment that is both objective and analytical. Traditional tests and quizzes are also modes of assessing students' acquired knowledge of specific course content. Library research and presentations help students become educators of their peers. ***U.S. History is a graduation requirement.*** (1 credit)
Prerequisite for U.S. History (Advanced): 90 average in Peace and Justice, review of analytical reading and writing proficiency, and departmental approval

2023-2024 History Electives–Grades 11-12

Contemporary Affairs (with Advanced Option)
Grades 11-12
Students will read, research, and discuss domestic and international current events that are contemporaneous or recently occurring. They will conduct analyses to understand perspectives, bias, fact, and opinion left in or out of texts and news outlets. In various units, students will learn about news coverage of broad current issues that could include topics such as immigration, foreign relations, and structural inequities in the U.S. and abroad. Students prepare both research-driven and reflective writing assignments and also participate in presentations to their peers. There is one research paper prepared during the semester, and, in addition, students track a specific ongoing news story using various media. (½ credit)
Advanced option prerequisites: 90 in prior department coursework, review of analytical reading and writing proficiency, and department approval

Gender & Queer Studies (with Advanced option)
Grades 11-12
This semester-long course provides an introduction to the history of the queer, feminist, and womanist movements in the modern era, with attention to the last century. Using an intersectional approach, the course examines how queer people and women have made an impact in the United States and throughout the world — influencing, defining, and creating change. The course will look at individual people and larger social justice movements with an aim of understanding how race, class, and nationality have shaped gender and queer identities. (½ credit)
Advanced option prerequisites: 90 in prior department coursework, review of analytical reading and writing proficiency, and department approval

Genocide Studies 1: Holocaust and Armenian Genocide (with Advanced option)
Grades 11-12
This course involves a semester-long exploration of genocide within two distinct settings. Students build foundational knowledge of the root causes, manifestation, and lasting effects of genocide by initially examining the Holocaust. The study of these events places significant demands upon students, challenging them to develop an understanding of the historical, psychological, and sociological influences that lead to genocide. After students develop competency in examining the Holocaust, the course shifts focus to the experience of the Armenian genocide. In each case study, stories of hope, resistance, and rescue are presented along with policies and practices used to marginalize and destroy targeted groups. The experiences and roles of perpetrators, victims, and bystanders are considered. The course is reading- and writing-intensive and includes several research projects. (½ credit)
Advanced option prerequisites: 90 in prior department coursework, review of analytical reading and writing proficiency, and department approval

Genocide Studies 2: Cambodian, Rwandan, Bosnian, and Indigenous People (with Advanced option)
Grades 11-12
This course builds upon and reinforces foundational knowledge of the root causes, manifestation, and lasting effects of genocide. Its content focuses on the experiences of genocide in Cambodia, Rwanda, Bosnia, and among Indigenous Peoples, both in the United States and in other countries. While Genocide Studies 1 is a suitable companion course, it does not serve as a prerequisite. The course is reading- and writing-intensive and includes several research projects. (½ credit)
Advanced option prerequisites: 90 in prior department coursework, review of analytical reading and writing proficiency, and department approval

Latinx-American Experiences (with Advanced option)
Grades 11-12
Latine/o/x/@ Experiences is an interdisciplinary course that places Latin Americans as the *subjects*—rather than objects—of American history. This is a course that cuts across history, philosophy, sociology, musicology, cultural studies, and critical legal studies in order to reframe Latinos as active producers and shapers of American History rather than passive victims of our oftentimes brutal and violent past. We will move through critical topics in Latinx Studies in order to survey the plurality of Latine *experiences*, cultural forms, and political thought. We will cover the debates over the boundaries of Latinidad and the intraracial tensions surrounding the "x" in Latinx. We will examine indigeneity and the fight for raza studies. We will examine the entanglement between the war on drugs and the war on the border to consider the ways state sanctioned violence makes targets of Latina communities. Finally, we will end the term considering the pursuit of more just futures in the wake of the Obama and Trump presidencies.
Advanced option prerequisites: 90 in prior department coursework, review of analytical reading and writing proficiency, and department approval

Modern Latin America (with Advanced option)
Grades 11-12
This course is a survey of Latin American history where we will trace multiple and overlapping histories starting with colonial encounters where we will come to a better understanding of how the enormous region we now know as Latin America fit into broader European projects of empire. We will come to understand how this history ushers forth ideas of race that are not analogous to North American conceptions of race. We will survey the struggles of independence that erupted in the 19th century, the spectral legacy of colonialism post-independence, and the emergence of nationalism across the region. In particular we will consider the effects of supranational bodies, like the World Bank and IMF, and the neoliberal reforms and impositions that continue to impact Latin America. We will close the term considering contemporary, unfolding issues in Latin America.
Advanced option prerequisites: 90 in prior department coursework, review of analytical reading and writing proficiency, and department approval

World History 1300–1800 (with Advanced option)
Grades 11-12
World History 1300-1800 examines the period from the 13th century through the late 18th century CE. It takes a global approach to human history. Broad themes are explored, including the interplay between economics, politics, religion, science, and culture in shaping societies and spurring human action; the interactions of humans with their environments; the impact of disease on society and culture; and the growing interconnectedness of the world during this period. Importantly, the course strives to separate world history from the Eurocentrism that has characterized the discipline of history since its inception. The course is intended to help students develop their critical reading, writing, and analytical skills, with an emphasis on historical thinking, argumentation, and presentation. The advanced course includes a

semester research paper in addition to the regular coursework. (½ credit)
Advanced option prerequisites: 90 in prior department coursework, review of analytical reading and writing proficiency, and department approval

World History 1800-2000 (with Advanced option)
Grades 11-12
World History 1800-2000 takes a global view of human history between the late 18th and late 20th centuries. The course explores many of the major global events, movements, and trends of the modern era as well as its salient themes, including industrialization, nationalism, imperialism, socialism, decolonization, globalization, and modernity itself. While Western Europe looms large over the history of this period due to its global dominance in the long 19th century, this course strives to "de-Europeanize" modern world history and examine global developments through a non-Eurocentric lens. The course is intended to help students develop their critical reading, writing, and analytical skills, with an emphasis on historical thinking, argumentation, and presentation. (½ credit)
Advanced option prerequisites: 90 in prior department coursework, review of analytical reading and writing proficiency, and department approval

Microeconomics
Grades 11-12
Economics is the study of how a society uses limited resources to produce and distribute the goods needed to live healthy and fulfilling lives. Microeconomics focuses on the decisions made by individuals and firms, covering topics such as gains from trade, supply and demand, the welfare impact of taxes, and firm costs and profits. Grounded in the school's mission with special attention to issues of stewardship and sustainability, Westtown's Economics courses also investigate the nontraditional discipline of Ecological Economics, which probes the limits of the Earth's resources and calls into question the basic assumption of the feasibility of ongoing growth in consumption. (½ credit)
Prerequisite: Two credits in history, including U.S. History. Also offered as a three-week online course in June, open to all Upper School students.

Macroeconomics
Grades 11-12
Economics is the study of how a society uses limited resources to produce and distribute the goods needed to live healthy and fulfilling lives. Macroeconomics focuses on the dynamics of the economy as a whole, covering topics such as inflation, growth, finance, and US monetary policy. Students also complete a major research paper on a topic of their choice related to Economics. Grounded in the school's mission with special attention to issues of stewardship and sustainability, Westtown's Economics courses also investigate the nontraditional discipline of Ecological Economics, which probes the limits of the Earth's resources and calls into question the basic assumption of the feasibility of ongoing growth in consumption. (½ credit)
Prerequisite: Two credits in history, including U.S. History. Also offered as a three-week online course in July, open to all Upper School students.

2024-2025 Proposed History Electives–Grades 11-12

The Cold War and US-China Relations (with Advanced option) - *offered in 2024-2025*
Grades 11-12
This class examines the global policies, people, and events that have shaped international relations from the use of the first nuclear weapons to the causes of 9/11 and the resulting global "War on Terror." The first semester course focuses on the developing bipolar world as the defining force in world political relations from the end of World War II and progressing up to modern-day relations with China and Russia. It addresses the origins of Cold War history, including the bombing of Nagasaki, and subsequent topics such as the Korean and Vietnam War. In addition to studying the nature of political and economic alliances as well as conflict in a global context, the class also examines the growing impact of globalization and

requires students to evaluate and recommend solutions for current international problems. *(*½ credit)
Prerequisite U.S. History or US History (Adv)

9/11 and Middle-Eastern Relations (with Advanced option) - *offered in 2024-2025*
Grades 11-12
During the second semester, the course focuses on the Middle East as a center of conflict and instability that affects international relations on the world stage. Topics include the roots of the Palestinian-Israeli conflict, the establishment of the state of Israel, and control of resources in the Middle East/North Africa. In addition, the course studies the impact of 9/11 on world international relations, relations with Iran, and other current developments, such as the Afghanistan withdrawal. Current events are an important component to the course. The course is reading and writing-intensive and includes both a research paper and many historical simulations and debates. *(*½ credit)
Advanced option prerequisites: 90 in prior department coursework, review of analytical reading and writing proficiency, and department approval

Asian American Studies (with Advanced option) - *offered in 2024-2025*
Grades 11-12
The purpose of this course is to allow students to take an in-depth look at a multitude of Asian American experiences in the United States. This course will cover the various routes and reasons for Asian immigration to the U.S. as well as the different experiences of Asian immigrant communities. The course text is Frank Wu's *Yellow: Race in America Beyond Black and White*. It blends history, critical race theory, and critical legal studies in order to disrupt the Black-White binary that characterizes contemporary racial discourse. Wu's work is complemented by films, including *Divided We Fall: Americans in the Aftermath, Taxi Cab to the Dark Side,* and *Homecoming King*. The course moves between past histories and contemporary issues to offer students a window into what the experiences of Asian Americans say about the U.S. today. *(*½ credit)
Advanced option prerequisites: 90 in prior department coursework, review of analytical reading and writing proficiency, and department approval

African American Experience (with Advanced option) - *offered in 2024-2025*
Grades 11-12
The purpose of this course is to allow students to take an in-depth look at a multitude of African American experiences in the United States. This course starts with the theoretical work of W.E.B. Du Bois and Patricia Hill Collins to offer analytic tools for understanding both historic and contemporary issues faced by African American communities. Additionally, this course uses the historical work of Joe Feagin and the ethnographic work of Eduardo Bonilla Silva in order to analyze the manifestations of and resistance to racism in the US. These core texts are supplemented by films, including *Get Out, Hip Hop: Beyond Beats and Rhymes*, and *Bright*. The course moves between past histories and contemporary issues to offer students a window into what the experiences of African Americans say about the U.S. today. *(*½ credit)
Advanced option prerequisites: 90 in prior department coursework, review of analytical reading and writing proficiency, and department approval

Microeconomics
Grades 11-12
Economics is the study of how a society uses limited resources to produce and distribute the goods needed to live healthy and fulfilling lives. *Microeconomics* focuses on the decisions made by individuals or firms. Grounded in the school's mission, with special attention to issues of stewardship and sustainability, Westtown's economics courses also investigate the non-traditional discipline of ecological economics, which probes the limits of the Earth's resources and calls into question the basic assumption of the feasibility of ongoing growth in consumption. The goal of this course is to provide a solid foundation in most of the topics found in an introductory college-level economics class. (½ credit)
Prerequisite: Two credits in history, including U.S. History. Also offered as a three-week online course in the summer, open to all Upper School students

Macroeconomics
Grades 11-12
Economics is the study of how a society uses limited resources to produce and distribute the goods needed to live healthy and fulfilling lives. *Macroeconomics* investigates the dynamics of the entire economy. Grounded in the school's mission, with special attention to issues of stewardship and sustainability, Westtown's economics courses also investigate the non-traditional discipline of ecological economics, which probes the limits of the Earth's resources and calls into question the basic assumption of the feasibility of ongoing growth in consumption. The goal of this course is to provide a solid foundation in most of the topics found in an introductory college-level economics class. (½ credit)
Prerequisite: Two credits in history, including U.S. History. Also offered as a three-week online course in the summer, open to all Upper School students

Modern Asia (with Advanced option) - *offered in 2024-2025*
Grades 11-12
This elective examines the role and importance of Asian nations through the 20th century to the present. Study will include both the domestic and global, and will focus on economic, political, security, and sustainability issues. Throughout the semester, regular attention to current events will help develop students' awareness of Asian nations and culture and regional challenges. Regular homework and quizzes, presentations, discussions, and a research project will constitute the main course requirements. (½ credit)
Advanced option prerequisites: 90 in prior department coursework, review of analytical reading and writing proficiency, and department approval

Modern Africa (with Advanced option) - *offered in 2024-2025*
Grades 11-12
The course will focus on developments within African nations and across the continent since World War II. Attention will be given to similarities and differences across the continent in social, cultural, and political areas. Students will have the opportunity to develop and carry out research in an area of their interest, and will develop a way to share their learning with the broader school community. The course may be taken for regular or advanced credit. Additional readings, length and depth of analysis in assessments, and one additional bi-weekly meeting time are required for advanced credit. (½ credit)
Advanced option prerequisites: 90 in prior department coursework, review of analytical reading and writing proficiency, and department approval

MATH

Students must complete three credits of math in grades 9 through 12. Most students take four credits of math; a significant number of students reach Calculus or a higher level of math.

Department Philosophy

Westtown's Math Department believes that innovative teaching and real-world applications are essential elements in engaging students in the study of mathematics. Through the course of the Upper School math program, students are exposed to many different ways of defining and framing problems, as well as solving them. Collaborative work, in-depth exploratory projects, and emphasis on critical thinking skills pervade our curriculum as we continually seek creative ways to help all students learn. Throughout all courses, technology is used to enhance learning and is balanced with maintaining a rigorous grounding in communicating clear, analytical mathematics.

Students will experience the following essential core experiences in the math curriculum:

- In-depth exploratory projects that apply math to everyday problems
- Analysis of data, graphic representation, and experiences creating mathematical models for the systems of generating data
- Exceptional rigor and challenge for the most advanced math students; including participation in AMC
- Emphasis on abstract reasoning skills and problem-solving skills
- Development of analytical skills through identifying mathematical questions, generalizing from particular examples and using abstract reasoning

Math Required Courses	
Algebra 1 Geometry* Algebra 2* *Advanced Option Available	
Math Recommended for all	
Precalculus* or Functions with Math Modeling *Advanced Option Available	
Math Electives	**Computer Science Electives**
Statistics Calculus 1* Calculus 2 (Advanced) Linear Algebra (Advanced) Multivariable Calculus (Advanced) Math Independent Research (Advanced) *Advanced Option Available	Intro to Programming Web Development Dynamic Application Development Computer Science 1 (Advanced) Computer Science Independent Research (Advanced)

Course Descriptions:

Algebra 1
Grade 9-10
This course provides the fundamentals in algebraic skills, builds on algebra topics studied in middle school, and prepares a strong foundation for students as they begin high school. Topics include linear functions, linear inequalities, systems of linear equations, properties of exponents, operations with polynomials, factoring, and introductory quadratic equations. Vocabulary, function notation, and graphing are emphasized. The course ends with an introduction to solving general quadratic equations. Successful completion prepares students to take Geometry or Geometry (Advanced). (1 credit)
Prerequisite: Placement test

Geometry
Grades 9-11
This course covers plane geometry and includes the study of congruence, similarity, ratio and proportion, area, the geometry of the circle, and right triangle trigonometry. Equal time is devoted to writing proofs and the appropriate application of theorems in problem solving. This course includes a review of algebra topics in preparation for Algebra 2. Successful completion of this course prepares students to take Algebra 2, or Algebra 2 (Advanced). (1 credit)
Prerequisite: Algebra I

Geometry (Advanced)
Grades 9-11
Geometry (Advanced) is an accelerated geometry course for the exceptionally strong math student who welcomes the challenge of a fast-paced course in order to thrive in the classroom. Students at this level are expected to develop strong skills in mathematical proof, reasoning, and problem-solving skills. The course reviews algebra topics in preparation for Algebra 2. Successful completion of this course prepares students to take Algebra 2, Algebra 2 (Advanced), or Algebra 2 & Trigonometry (Advanced). (1 credit)
Prerequisite: Algebra 1 (90 or higher) and department permission

Algebra 2
Grades 9 - 12
Building from the topics covered in Algebra I, this course guides students through an exploration of linear and nonlinear functions. Students gain fluency in translating between representations of patterns as equations, tables, and graphs. Students also examine function behavior, particularly by exploring transformations and function inverses. Throughout the course, real-world applications and problem-solving activities will provide students with the opportunity to demonstrate a deeper understanding of the material. Students will also use the TI-84 calculators, online graphing calculators, and web resources as they explore these topics. Next year math courses could include Statistics, Functions with Math Modeling, or Precalculus. (1 credit)
Prerequisite: Geometry or Geometry Advanced

Algebra 2 (Advanced)
Grades 9 - 12
This course furthers the study of algebra by looking at classes of functions. Students will examine linear, quadratic, polynomial and exponential functions algebraically, numerically and geometrically. A graphing calculator will be used to support the algebraic manipulation and allow the students to see and explore the mathematics. Algebra 2 (Advanced) moves at a rapid pace and requires students to be independent and to make conjectures on their own. Successful completion of Algebra 2 (Advanced) prepares students to take Precalculus (Advanced). (1credit)
Prerequisite for Algebra 2 (Advanced): Geometry (90 or better) or Geometry (Advanced) and department permission

Algebra 2 & Trigonometry (Advanced)
Grades 9 - 12
This is an accelerated course for the exceptionally strong math student who loves the challenge of a fast-paced course. The course covers the same topics as the advanced Algebra 2 ***and*** Precalculus courses, thus completing two years of math in one school year. Successful completion of this course prepares students to take Calculus 1 (Advanced). (1 credit)
Prerequisite: Geometry (95 or better AND department permission) or Geometry (Advanced) (90 or better) AND department permission

Functions with Math Modeling
Grades 11-12
This course begins with the study of the functions normally covered in a precalculus course through their applications to the physical sciences, economics, and business phenomena. Unlike Precalculus, where these topics are developed from a rigorous theoretical foundation, students will encounter trigonometric, logarithmic, exponential, polynomial, and rational functions as they emerge from application problems. The course will emphasize graphs, problem-solving skills, and mathematical modeling using appropriate software. Students will also learn to communicate their solutions through writing and presentations. Successful completion of this course prepares students to take Precalculus or Statistics. (1 credit)
Prerequisite: Algebra 2

Precalculus
Grades 9 - 12
Seeking to prepare students for Calculus, this course develops functions of a real variable – their domains, ranges, and graphs. Problem solving and modeling with trigonometric, logarithmic, exponential, polynomial, and rational functions is the focus of this course. (1 credit)
Prerequisites: 85 or higher in Algebra 2, 80 or higher in Algebra 2 (Adv), 90 or higher in Functions and department permission

Precalculus (Advanced)
Grades 9 - 12
For students ready for an accelerated approach, this course covers all topics from Precalculus in a rigorous problem-solving format. Additional topics may include polar graphing, parametric curves, sequences and series, probability, limits, and the limit definition of the derivative. (1 credit)
Prerequisites: A grade of 90 or higher in Algebra 2, a grade of 80 or higher in Algebra 2 (Adv) and department permission

Statistics
Grades 11 - 12
This course uses theoretical approaches and real-world data to develop an understanding of data summary, the Normal model, sampling, correlation and regression, sampling, experiments, probability, and hypothesis testing. Using this foundation, students design an experiment or observational study on a topic of their choice and interpret the data using appropriate tools. Intuitive understanding and development of content through group work are key parts of this course.
(1 credit) ***Prerequisites: Algebra 2 and department permission***

Calculus 1
Grades 10 - 12
This course reviews the concept of a limit and then provides a full development of both differential and integral calculus. The material is both a base for more advanced mathematics and a tool for solving application problems in a wide array of disciplines. Intuitive understanding and development of content through group work are key parts of this course. (1 credit)
Prerequisites: Precalculus (80 or higher) and department permission

Calculus 1 (Advanced)
Grades 10-12
This course reviews the concept of a limit and then provides a full development of both differential and integral calculus. The material is both a base for more advanced mathematics and a tool in a wide array of disciplines. This course is taught with a rigorous theoretical approach. Students who successfully complete the course can take the AB level Advanced Placement exam. (1 credit)
Prerequisites: Precalculus (90 or higher), Precalculus Advanced (85 or higher), Advanced Algebra 2 & Trigonometry (80 or higher) and department permission. This course prepares students who have performed well to take the AP exam in Calculus AB.

Calculus 2 (Advanced)
Grades 11- 12
As a continuation of Calculus I (Advanced), this course fully develops the following topics: techniques of integration, infinite series, and functions in parametric and polar form. Mathematical modeling, including error analysis and numerical approximation of integrals, is a key component of this course. Students are expected to share in the presentation of the material and engage in deep problem solving. Additional topics are included based on the special interests of students and the instructor. (1 credit)
Prerequisite: Calculus I Advanced with a final grade of 80 or higher or Calculus 1 with a final grade of 90 or higher and department permission. This course prepares students who have performed well to take the AP exam in Calculus BC.

Linear Algebra (Advanced)
Grade 12
This course includes the study of vectors, vector spaces, linear transformations, inner products, eigenvalues, eigenvectors, and the application of these topics to Markov chains and difference equations. Students who register for this course must also take Multivariable Calculus. (½ credit)
Prerequisites: Calculus 2 with an 80 or higher and department permission

Multivariable Calculus (Advanced)
Grade 12
In this course, students study Multivariable Calculus; including differential, integral, and vector calculus for functions of more than one variable. (½ credit)
Prerequisite: Linear Algebra and department permission

Computer Science Courses

Note: all Computer Science courses require students to use either a Windows or a Mac computer. Chromebooks do not meet the technical requirements for these classes.

Introduction to Programming: Building with Software
Grades 9-12
This course provides a true introduction to computer programming for students with no previous experience. Fundamental concepts of programming are taught primarily using Python. Additional topics are included. In addition to gaining working skills in Python, emphasis is placed on developing collaborative problem-solving capabilities, leadership, and presentation skills as students work on many individual and team projects. The ethics of software design and use on people are addressed. (½ credit)
Prerequisites: none

Website Development
Grades 10-12
This course provides an introduction to designing and developing front-end websites for students with some previous programming experience. Web development is taught using an HTML/CSS/Javascript stack using the students' own laptops and a variety of Internet reference tools. Considerations for the effective design of user interfaces are discussed. Emphasis is placed on designing and developing

collaborative problem-solving capabilities and solving problems that matter as students work on individual, team, and full-class projects. (½ credit)
Prerequisites: Algebra 2, Introduction to Programming or equivalent work, and department permission

Dynamic Application Development
Grades 10-12
This course provides the experience of creating dynamic web applications with distributed components, including a server-hosted database. This course is for students with previous coding experience. An appreciation for both strategic thinking and detailed code development is required for success. Dynamic Application Development is taught using a full HTML/ CSS/ Javascript/ PHP/ MySQL/ SQL full-stack using the students' own laptops, web servers, technical collaboration software, and a variety of Internet reference tools. Students envision, design, and craft a major individual project during the course. Emphasis is placed on developing collaborative, problem-solving capabilities and solving problems that matter. Students who plan to develop complex applications should take Web Development prior to this course. (½ credit)
Prerequisites: Web Development or demonstrated skills from equivalent work, and department permission

Computer Science 1 (Advanced)
Grades 10–12
This course provides the opportunity for students to bring their prior systems development experience to bear on integrated problem investigations, analyses, and solutions. Students can envision problems from humanities, science, environmental, finance, and math contexts and be coached in using data and coding to investigate, analyze, and answer these questions. Emphasis is placed on the use of data, developing collaborative problem-solving capabilities, leadership, and presentation skills as students work on individual, team, and full-class projects. (1 credit)
Prerequisites: Web Development and Dynamic Application Development, or demonstrated strong coding skills from equivalent work, and department permission

RELIGION

Students are required to take 1.75 credits of Religion in grades 9-12.

Department Philosophy

The Religion Department develops practical knowledge, spiritual depth, and ethical citizenship through exposure to the history, beliefs, and practices of Quakerism, the major religions of the world, and faith-based social justice movements. The curriculum is rooted in religious literacy and a cultural studies approach which distinguishes the academic study of religion from devotional faith-based instruction. This approach also emphasizes religions as internally diverse, evolving and changing over time, and embedded in all dimensions of human experience. Courses provide an opportunity for students to explore lived religious experience from a wide diversity of religious traditions with an emphasis on student-centered discussions. Many courses also examine secular and non-religious worldviews. The curriculum fosters critical examination of ourselves in the world, diversity in the Westtown School community, and the role of religion in history and contemporary culture.

Students will have the following core experiences in the Religion Department:

- Reflection, mindfulness, and respectful listening practices
- Interpretation of religious literature and experience
- Presentation of knowledge and facilitation of discussion
- Examination of the role of religion in current events
- Field trips to a local church, synagogue, mosque and/or Hindu temple
- Variety of responses to religious exploration: academic research, reflective journal writing, and arts-based project

Religion Required Courses
Quakerism in Life and Practice World Religions 1: Christianity and Judaism World Religions 2: Hinduism, Buddhism, Islam
Electives—Required to take one in 11th grade or 12th grade
Environmental Justice* Ethics & Philosophy* Religion, Gender, & Sexuality * Building the Beloved Community* *courses offered at both the advanced and regular levels

Students in advanced electives are held to a higher standard of academic rigor, including the completion of three or more additional independent projects throughout the semester to enhance the study of the course content. To enroll in an advanced elective, students must have achieved a minimum grade of 90% in either World Religions 2 or another religion elective. Otherwise, the student may petition the department for approval.

Course Descriptions:

Quakerism in Life and Practice
Grades 9-10

This course, required of all 9th and 10th grade students, blends academic study with personal reflection and spiritual exploration. Students consider their own beliefs as they learn about Quakerism and the way in which Quakerism impacts life at Westtown. Students will study Quaker history, practice, and testimonies and examine their own participation in creating a life which values the good in others and a society based on respect, integrity, and equality. (¼ credit)

World Religions 1: Judaism & Christianity
Grades 10-11
World Religions 1 introduces students to the study of religion as an academic discipline. With new interpretive tools, students will examine the textual foundations, beliefs, ritual practices, and lived experience of Jews and Christians in their evolving historical and cultural contexts. Students will gain from this course both a nuanced understanding of Judaism and Christianity as well as an enhanced ability to interpret the role of these religions in culture and politics. (½ credit)

World Religions 2: Hinduism, Buddhism, Islam
Grades 11-12
World Religions 2 explores three significant and often misunderstood religions: Hinduism, Buddhism, and Islam. These traditions are studied through their primary sacred texts, ritual practices, and cultural manifestations. Students will showcase what they have learned through student-centered discussions, analysis of case studies, and the arts. With a basic understanding of these religious traditions, students will be better equipped to act as ethically responsible citizens in a multi-religious world. (½ credit)
Prerequisite: World Religions 1. Second-year students who wish to take World Religions 2 in the second semester of their second year may do so with department approval.

Building the Beloved Community: Religious Nonviolent Movements and Social Change (with Advanced option)
Grades 11-12
The title for this course comes from Rev. Dr. Martin Luther King Jr.'s lifelong dedication to building a "beloved community." He frequently used this term to express his vision for a world in which poverty, hunger, and homelessness become meaningless in light of international standards for human dignity, and the causes for war, racism, and all forms of prejudice and discrimination become obsolete. The course considers Christianity in particular and religion in general as a vehicle for social and political freedom of the oppressed; meanwhile, recognizing the ways in which Christianity and other religions have perpetuated forms of structural and cultural violence. Students will examine specific contexts in which religion and religious leaders have inspired and informed nonviolent resistance in the face of first-world privilege, socioeconomic inequality, and race discrimination. (½ credit)
Prerequisite: World Religions 1

Gender, Sexuality, and World Religions (with Advanced option)
Grades 11-12
This course is about how gender and sexuality are expressed through religious ideas and how gender and sexuality is experienced by religious people. We will examine sacred texts, practices, doctrines, ethical frameworks, and cultural worldviews which concern themselves with gender and sexuality. Topics explored in this course include, but are not limited to, masculinity and femininity, transgender studies, celibacy, monogamy, sex positivity, sexual impropriety, and homosexuality. Students will gain a rich understanding of the spectrum and diversity of views about gender and sexuality within many religions and an ability to think more critically about gender and sexuality as important aspects of the human condition.(½ credit)
Prerequisite: World Religions 1 & 2

Environmental Justice: Our Deep Stories and Moral Imaginings (with Advanced option)
Grades 11-12
This course will examine the environmental crisis of our time and its deep and considerable implications for human life, ecological systems, and justice in this world. Students will attend to religious and secular narratives that have given rise to the current state of the environment—both positively and negatively. While being self-reflective about their beliefs and actions, including how they are implicated in both causes and solutions to issues of environmental justice, this course leads up to a capstone research project in which students develop a justice-oriented solution to an environmental concern aligned with their interests.(½ credit)
Prerequisite: World Religions 1 & 2

Ethics & Philosophy: Right, Wrong, and the Human Spirit (with Advanced option)
Grades 11-12
This course offers students the opportunity to explore issues that are profound and complex as both individuals and members of a global community. We will engage with a variety of philosophical texts, ethical frameworks, and case studies that offer various perspectives on fundamental questions such as: What does it mean to be a human being and what is the right thing to do? Through a rich combination of critical thinking and deep introspection, students will explore philosophical concepts related to moral decision-making, free will, and human nature. Students will also have the opportunity to engage in independent research based on their personal interest. (½ credit)
Prerequisite: World Religions 1

SCIENCE

Students must take at least four semesters of lab sciences. In order to develop a balanced program of study in the sciences, we encourage students to take at least two semesters of physics, chemistry, and biology in their high school program.

Department Philosophy

Through a host of challenging course offerings, the Science Department aids students in their understanding of the natural world. Students are encouraged to explore their surroundings, question, seek answers, and look at the world from different perspectives. Humans profoundly impact the world today. Understanding this impact helps our students become better stewards of the natural world. The Science Department sees the scientific method as a way to acquire and test knowledge. Students are immersed in first-hand experience. The school's large and biodiverse campus is a living lab to explore topics as well as for field observations. Frequent group work and lab partners help students learn that scientific investigation is often collaborative in nature.

Students will have the following core experiences in their study of science:

- Following a sequence which builds from the most basic physical forces to complex life processes
- Integrating classroom learning with real-world situations
- Designing experiments, organizing and analyzing data, and interpreting results
- Exploring the diverse ecosystems of the Westtown campus
- Scientific approach which informs students about social and global concerns

Science Required Courses
Physics 1* Chemistry 1* Biology 1 & 2* *Advanced Option Available
Science Recommended for all
Physics 2* Chemistry 2* *Advanced Option Available
Electives 2023-2024
Anatomy & Physiology (Advanced) Molecular Biology (Advanced) - Full year+ Biology of Disease - Semester 1 Bioethics - Semester 2

Environmental Science 1 *
Environmental Science 2*
*Advanced Option Available

Astronomy
Electricity & Magnetism (Advanced)
Modern Physics (Advanced)
Applied Chemistry

Zoology & Biochemistry of Animal Behavior (2023-2024)[+]
Chemical Bonding (2024-2025)
Chemical Reactions (Advanced)

Introduction to Mechanical Engineering: Tools & Fabrication
Design Engineering
Design Engineering Solutions 1, 2 (Advanced)

Scientific Research (Advanced)

Course Descriptions:

Foundation Year 1: Physical Sciences — Physics 1 & Chemistry 1

Physics 1
Grades 9-11
In this hands-on and laboratory-centered course, students will learn to describe and analyze motion and its causes. Students will use the mathematical tools that scientists use in the laboratory including equations, graphical analysis, and computers. Modern computer sensors and specialized graphing software will aid in data collection. Topics include physical quantities and measurement, kinematics in one dimension, forces and Newton's Laws, work, energy, and momentum. (½ credit)

Physics 1 with Trigonometry (Advanced)
Grades 9-11
The advanced course is available to students with strong math backgrounds. Algebra is used extensively to model physical systems, and trigonometry is introduced for two-dimensional analyses. Inquiry-based, hands-on labs are used throughout this course as students learn to describe and analyze motion and its causes. Topics include physical quantities and measurement, kinematics in one and two dimensions, forces and Newton's Laws, work, energy, and momentum. (½ credit)
Prerequisites: Geometry (Advanced) or higher math course

Chemistry 1: Atoms to Reactions
Grades 9-11
This is an introductory chemistry course emphasizing concepts and quantitative problem-solving. Laboratory work gives students extensive hands-on experience with chemical reactions and develops strong analytical skills. Topics include physical and chemical properties, atomic structure, electron configurations, the periodic table, periodic trends, ionic and covalent bonding, nomenclature, and chemical reactions. (½ credit)
Prerequisites: Physics 1

Chemistry 1: Atoms to Reactions (Advanced)
Grades 9-11
The advanced course moves at a faster pace than Chemistry 1, with a greater emphasis on analytical problem solving and interpretation of laboratory data. Topics include physical and chemical properties, atomic structure, electron configurations, the periodic table, periodic trends, ionic and covalent bonding,

nomenclature, and chemical reactions. Students are exposed to more abstract thinking in terms of applications of mathematics. Laboratory experiments are more complex, relying on students' previous experience in the lab, and include analysis of more sophisticated data. (½ credit)
Prerequisites: Physics 1 (Advanced) or Physics 1 (90 or above and departmental approval)

Foundation Year 2: Life Sciences — Biology and Ecology
Biology 1: Cell and Molecular Biology
Grades 10-12
This course establishes a solid foundation in modern biology by covering topics in cellular and molecular biology, including biochemistry, enzymes and energy, cell membrane structure and transport, and the cell cycle. Additional cellular topics include the generation of energy during cellular respiration and the process of cell division. Using microscopes and other lab equipment, students will complete lab work that complements and underlines the concepts learned in class. Students will practice working with peers as well as independent thinking. (½ credit)
Prerequisites: Physics 1 & Chemistry 1

Biology 1: Cell and Molecular Biology (Advanced)
Grades 10-12
This foundational biology course covers topics in cellular and molecular biology, including biochemistry, enzymes and energy, cell membrane structure and transport, the cell cycle, gene expression, and biotechnology. Students will have ample opportunities to apply their biological knowledge to real-world problems, and will gain skills in biological experimental design and scientific communication. Students will practice independent thinking and learning as well as extensive collaboration with peers. (½ credit)
Prerequisites: Physics 1 (Advanced) & Chemistry 1 (Advanced) (85 or above in each course) or Physics 1 & Chemistry 1 (90 or above in each course or above and departmental approval)

Biology 2: Ecology
Grades 10-12
This one-semester course serves as an introduction to the field of ecology. Students will start by identifying key global ecological concepts to provide context for identifying and interpreting the variety of ecosystems found on our campus, which are representative of the major ecological systems found in the northeastern United States. Students will gain experience in both field and laboratory investigation techniques. A key goal of this course is to improve analytical and writing skills through analysis and interpretation of ecological data. (½ credit)
Prerequisite: Biology 1

Biology 2: Ecology (Advanced)
Grades 10-12
Building on the basic skills and information introduced in Biology 1 (Advanced), this course examines organisms on a macroscopic scale, at the level of populations and ecosystems. Students will learn principles of genetics, evolution, ecology, and climate change and will practice laboratory skills and field techniques. Evolution topics include the evolution of populations, speciation, and the history of life on earth; ecology topics include population dynamics, community interactions, ecosystems, and conservation. Data generation, analysis, and interpretation are integral parts of this course and students will finish the year by completing an ecological experiment. (½ credit)
Prerequisite: Biology 1 (Advanced) (85 or above) or Biology 1 (90 or above and department approval)

Foundation Year 3: Physical Sciences--Chemistry 2 and Physics 2
Chemistry 2: Moles and Stoichiometry
Grades 11-12
In this course, students will further their study of chemical reactions, with an introduction to moles, stoichiometry, gasses, thermochemistry, acid-base reactions, and nuclear chemistry. Laboratory experiments are more complex, relying on students' previous experience in the lab and include analysis of more sophisticated data. (½ credit)

Prerequisite: Chemistry 1

Chemistry 2: Moles and Stoichiometry (Advanced)
Grades 11-12
The advanced course moves at a faster pace than Chemistry 2, with a greater emphasis on analytical problem solving and interpretation of laboratory data. Topics include an introduction to moles, stoichiometry, gasses, thermochemistry, acid-base reactions, and nuclear chemistry. Students are exposed to more abstract thinking in terms of applications of mathematics. Laboratory experiments are more complex, relying on students' previous experience in the lab, and include analysis of more sophisticated data. (½ credit)
Prerequisite: Chemistry 1 (Advanced) (85 or above) or Chemistry 1 (90 or above and department approval)

Physics 2
Grades 11-12
In this hands-on and laboratory-centered course, students will continue their study in physics by looking at various types of periodic motion and the waves caused by these motions. Topics include energy and work, electricity, pendulums, harmonic motion, sound and light waves, and optics. (½ credit)
Prerequisite: Physics 1

Physics 2 with Trigonometry (Advanced)
Grades 11-12
The advanced course is available to those who have demonstrated a high degree of proficiency in their first semester of physics, and are ready for advanced mathematical rigor. Topics include circular motion, universal gravitation, rotational motion, pendulums, harmonic motion, sound and light waves, and optics. (½ credit)
Prerequisite: Physics 1 with Trigonometry (Advanced) (85 or above) or Conceptual Physics 1 (90 or above and department approval)

Electives in Biology, Chemistry, Design Engineering, Environmental Science, Physics
Upon completion of a full credit in physics, chemistry, and biology, students may elect from a wide variety of elective courses. With department permission, students may enroll in two science courses simultaneously if they have met the prerequisites and demonstrate strength in foundation courses.

Biology options:
Anatomy and Physiology (Advanced)
Grades 11-12
The goal of Advanced Anatomy and Physiology is to approach the study of human systems in a project-based and student-centered approach. Students will leave this course with the fundamentals of human anatomy and physiology. Students will apply scientific principles, concepts, and methodologies to understand the interrelationships of systems at a cellular and molecular level. The themes of evolution, homeostasis, and interdependence will be heavily emphasized throughout the course. All students will design and conduct an investigation related to exercise and sports science. Students that are interested in pursuing a career in medical sciences or exercise sciences should consider taking this highly engaging course. (½ credit)
Prerequisites: Biology 1 & Biology 2 (Advanced) and department approval

Bioethics
Grades 11-12
Over the last 50 years, the field of Bioethics has developed to focus on not only medicine and research, but also social issues and environmental concerns. This course will briefly highlight the history of Bioethics and survey various ethical topics in healthcare, public health policy, the environment, technology, medicine, and research. Students will practice strategies for identifying and analyzing ethical dilemmas to develop critical-thinking skills and to recognize injustices throughout our society. This course will entail discussions and debates on bioethical cases allowing students to develop and present concise,

data-driven arguments as well as improve their ability to listen with empathy, respect, and understanding to all sides of an issue. (½ credit).
Prerequisites: Biology 1 & Biology 2 and Junior or Senior status

Biology of Disease
Grades 11-12
This course will explore human infectious diseases, including their causation, transmission, symptoms, diagnosis, treatment, prevention, and cure, if known. Modules will include: the bubonic plague, yellow fever, influenza, smallpox, cholera, MRSA, HIV, Ebola, Zika, and COVID-19. In addition to studying the epidemiology of these diseases, we will use films, case studies, and other documents to examine the intersection of disease and social justice. Students will also learn about the immune system, vaccination, and some of the tools and thinking employed by epidemiologists of the past and present. (½ credit)
Prerequisites: Biology 1 & Biology 2

Molecular Biology (Advanced)
Grades 11-12
This course partners with the Stan-X program developed by Stanford University scientists, in a consortium of ten schools at the secondary and college level. Research topics will flow from DNA to RNA to protein covering the central dogma of molecular biology. Students will go beyond the groundwork laid in their foundational biology courses and develop a more detailed understanding of the processes of DNA structure, function and synthesis, RNA synthesis, protein synthesis, genetic engineering, cloning, and many other applications of molecular biology using the model organism, *Drosophila melanogaster* (the fruit fly). Students will search protein databases to discover evolutionary connections among various organisms. The course is lab intensive and will introduce the students to many advanced lab techniques. Investigation of the scientific literature will be required. Research papers and projects will be scheduled throughout the course. (1 credit)
Prerequisites: Biology 1 & 2 (Advanced), Chemistry 2 (Advanced), and Physics 2 (Advanced) and department approval

Chemistry Options:
Applied Chemistry
Grades 10-12
This inquiry-based course seeks to demystify the science of the things that we encounter everyday. The course is designed with student interest at the center and all lessons are developed with student input at the start of the semester. Special attention in development of course materials to inclusion of all scientist ideas, with a focus on underrepresented voices. Previous and possible topics include alternative energy; food chemistry: baking, frying, boiling, refrigerator and freezer storage, decomposition, microbes, abiotic components; fashion textiles, materials fibers and pigments; pharmaceutical and medicinal chemistry (indigenous vs. modern); cosmetic chemistry, drugs and brain chemistry, neurology, sleep, and forensics. (½ credit)
Prerequisite: Chemistry 1

Chemical Bonding (Advanced) - *offered in 2024-2025*
Grades 11-12
This advanced course offers an intensive study of atomic theory, periodic trends, bonding, and an introduction to organic chemistry. We will explore several theories of bonding, including Lewis Structures, VSEPR Theory, hybridization, and molecular orbital theory. Students will conclude the course with a self-designed research paper. (½ credit)
Prerequisites: Chemistry 1 & 2 (Advanced) and department approval

Chemical Reactions (Advanced)
Grades 11-12
This course focuses on the applications of chemical reactions in everyday life. Example topics include learning about chemical reactions and the basics of pharmacology with the production of aspirin; investigating equilibrium and applications of acid/base chemistry; exploring electrochemistry with the

creation of batteries; and studying the chemistry of polymers with the production of simple polymers. Students will conclude the course with an independent project examining chemistry in industry. (½ credit)
Prerequisites: Chemistry 1 & 2 (Advanced) and department approval

Zoology and Biochemistry of Animal Behavior (with Advanced option)
Grades 11-12
Zoology and Biochemistry of Animal Behavior introduces students to the major phyla of the animal kingdom through a project-based approach that integrates different aspects of Westtown's 600-acre campus. Students will explore the animal behavior, evolution, biology, comparative anatomy, and chemistry of phyla ranging from bacteria and protists to mammals. In-class projects include hatching chicken embryos, studying water samples, snapping turtles, and frogs at Westtown Lake, visiting the campus beehives, dissecting a dogfish shark, building an ant farm, observing the growth of tadpoles into frogs, and identifying bird calls on campus. Students will also engage in off-campus visits to various locations.

Advanced students will be assigned additional work through the semester. (½ credit)
Prerequisites: Biology 1 & 2, Chemistry 1 & 2, and department approval

Environmental Science Options:
Environmental Science 1 (with Advanced option)
Grades 10-12
The goal of Environmental Science 1 is to provide a project-based, student-centered approach to engage students with scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world. Students will be led through inquiry to identify and analyze environmental problems, both inherent and human made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. Environmental science 1 is interdisciplinary; it embraces a wide variety of topics from different areas of study. The curriculum draws upon various scientific disciplines including Earth Systems and Resources, The Living World, Population Dynamics, Water Use, Energy Resources and Consumption, and Pollution. This class spends ample time doing field studies around Westtown's campus.

Advanced students will design and conduct at least one scientific investigation throughout the semester using the APA proposal template. Advanced students will also be expected to complete a Currents Events ePortfolio. Due to the independent nature of the Advanced option, students must be willing to put in considerable time reading and writing outside of the class. (½ credit)
Prerequisites: Biology 1 & 2. Advanced requires department approval

Environmental Science 2 (with Advanced option)
Grades 10-12
This course focuses on some of the most pressing environmental issues facing humans today: industrial agriculture and consumerism. Westtown's 600-acre campus will be our classroom as students investigate soil quality and the surrounding plants and wildlife. Topics include population growth, waste management, "fast fashion," food resources, sustainable agriculture, land-use policies as they relate to social justice issues, and genetically-modified organisms. A key component of this course will be reading scientific journal articles in order to form an informed opinion on genetically modified organisms. Students will hone their technical writing and speaking skills and will practice reading scholarly articles.

Advanced students will design and conduct an independent research investigation related to "fast fashion," waste management, or agriculture. This independent research requires considerable reading and writing outside of class. This course will prepare students to lead scientific investigations in other Westtown courses or in their post-secondary studies. (½ credit)
Prerequisites: Biology 1 & 2. Advanced requires department approval

Physics Options:

Astronomy

Grades 11-12

This survey course provides an introduction to the structure, composition, physics, and evolution of the universe. We begin with the history of how ancient astronomers studied the skies, building increasingly effective theoretical models to make sense of the behavior of the celestial sphere and the Earth's place in the cosmos. We will study the tools of astronomy—telescopes, spectroscopy, and orbital dynamics—and the objects they describe: the Sun, planets, moons, and other objects in our own solar system. Then we will extend our focus outward to stellar life cycles, exoplanets, black holes, neutron stars, the possibility of extraterrestrial life, and the eventual fate of the broader universe. Labs will incorporate data not only from our own observations (outdoor naked eye viewing, sky modeling software, and Westtown's own Cassegrain telescope) but will also use publicly available astronomical data. While quantitative calculations are included, the emphasis will be on conceptual understanding, descriptive models, and class discussion.
Prerequisite: Physics 1 and Chemistry 1

Electricity and Magnetism (Advanced)

Grades 11-12

Students will explore electromagnetic phenomena and their causes in this calculus-based physics course. Investigations of topics will include inquiry-driven, hands-on labs, computer simulations, and supplemental readings. Topics include electric forces and fields, electric potential and potential energy, capacitance, DC and AC circuits, magnetic forces and fields, and electromagnetic induction. (½ credit)
Prerequisites: Physics 2 with Trigonometry (Advanced) and department approval; Co-requisite: Calculus 1 (Advanced)

Modern Physics (Advanced)

Grades 11-12

In this advanced course, students will explore developments in the field of physics from the 20th century and onward. Investigations of topics will include inquiry-based, hands-on labs, computer simulations, and supplemental readings. Topics include special relativity, physical optics, black-body radiation, the development of the modern quantum theory, atomic structure, and nuclear physics. (½ credit)
Prerequisites: Physics 2 with Trigonometry (Advanced) and department approval; Co-requisite: Calculus 1 (Advanced)

Design Engineering Options:

Introduction to Mechanical Engineering: Tools and Fabrication

Grades 9-12

The development of engineered solutions requires students to master fundamental skills in using technical tools. In this project-based class, students will learn those skills as they fabricate mechanical devices ranging from simple components to operable, programmable robots. Using the principles of CAM (computer-aided manufacturing), students will construct pre-designed projects using a 3-D printer, laser cutter, CNC router or mill, and a variety of standard machine tools. No prior experience is necessary. (½ credit)

Design Engineering

Grades 10-12

Design Engineering integrates the concepts, skill sets, and mastery of the foundational approaches to project creation taught in our introductory courses. Students develop an understanding of project ideation, research methods, communication and workflow tools, iterative prototyping, timelining and progress accounting, and budgeting and implementation. In this course, students will work through a series of projects that build upon each other to develop a broad and deep set of skills in preparation for future work in the curriculum. Design Engineering creates collaborative cohorts of students with a range of skills sets and experiences to design and engineer applied products and solutions to address real world challenges or needs. Design Engineering is a prerequisite for Designing Solutions 1 and 2.
(½ credit)
Prerequisite: Introduction to Mechanical Engineering

Design Engineering Solutions 1 & 2 (Advanced)
Grades 11-12
Students who have successfully completed both **Design Engineering** and **Mechanical Engineering** may propose to pursue an advanced project with fabricated deliverables in Design Engineering Solutions. **Project proposals will be developed and submitted for review *in advance of enrollment* in the course**, and the course may be taken for one semester or a full year depending on the nature and scope of the work. (½ credit)
Prerequisites: Introduction to Mechanical Engineering, Design Engineering, and department approval

Research Options:
Scientific Research (Advanced)
Grades 11-12
Students will conduct original research on a question mutually agreed upon by each student and the teacher. Possible areas of study include biomedical research, molecular biology, animal physiology, and biomechanics, among others. Throughout the year, students will review primary literature, develop protocols, collect and analyze data, and present work to a variety of audiences. The year will culminate in the preparation of a formal lab report written in a style suitable for publication in a peer-reviewed journal and the presentation of a scientific poster. This course requires a great deal of initiative, follow-through, and independent work, both in and out of the lab, and is best suited to students with a clear vision for what they wish to pursue. *(1 credit)*
Prerequisites: Students must complete Biology 1 & 2, Chemistry 1 & 2, Physics 1 & 2, and department approval

Co-curricular science activity:

ROBOTICS
The Westtown Robotics team is part of **FIRST** (***For Inspiration and Recognition of Science and Technology***), an organization which creates a dynamic link between science and technology. The Westtown team, number 1391 —the Metal Moose— develops students' skill sets in programming, CAD, sensor integration, design/build engineering, business strategic planning, communications and marketing, graphic design, and service outreach to underserved communities. The Westtown robotics team works on real-world applications of science and technology, both within the framework of FIRST and in independent projects during the off-season.

WORLD LANGUAGES
Students are required to take at least two consecutive years of a single foreign language in grades 9 and 10; we recommend that they take at least three years of a world language.

Department Philosophy
Westtown School sees the acquisition of a second (or even a third) language as essential to successful participation in the world community; language and cultural acumen are instrumental 21st century skills. We aim to prepare Westtown students for an interconnected world in which people of diverse linguistic and cultural backgrounds collaborate together. Immersion in additional languages and working toward fluency are essential tools for a global world.

Students who pursue advanced language studies will have gained:

- Language immersion in the classroom, providing a high level of proficiency in communicating spontaneously in the spoken languages
- Appreciation for a culture and a way of thinking different from the student's own
- An ability to communicate by listening, speaking, reading, and writing at least one additional language
- Travel abroad opportunities in China, Puerto Rico, Greece/Italy or other countries where participants gain first-hand immersion experience and close connections with local people

World Languages Required Courses	
2 credits of the same language in grades 9 - 12	
Chinese 1, 2, 3	Latin 1, 2, 3
French 4, 5	Spanish 1, 2, 3
Electives	
3rd, 4th (Adv), 5th (Adv) credit of language	
Chinese 3, 4, 5, 6	Latin 3, 4, 5, 6
French 4, 5, 6	Spanish 3, 4, 5, 6

Course Descriptions:

CHINESE (MANDARIN)

Chinese 1
Grades 9-12

This introductory course is designed for students who have little or no prior exposure to Chinese. The main objective of the course is to help students build understanding of Chinese language and culture with themes and subjects that are relevant to their daily lives focusing on interpersonal, interpretational, and presentation skills. The pedagogical instruction employs a step-by-step approach that reinforces oral communication and a solid foundation of character recognition and typing. After one year of instruction, students should achieve proficiency level of novice mid to novice high as defined by the American Council on the Teaching of Foreign Languages. They will be able to 1) participate in a conversation on familiar topics; 2) respond to simple questions; 3) provide information about oneself; 4) understand some important elements of Chinese culture; and 5) recognize 200 characters and reproduce approximately 150 characters. (1 credit)

Chinese 2
Grades 9-12

The objective of this course is to help students build a solid foundation of the four basic skills – listening, speaking, reading, and writing – in an interactive and communicative learning environment. At the completion of this course, students should achieve proficiency level of novice high to intermediate low as defined by the American Council on the Teaching of Foreign Languages. They will be able to 1) ask and answer questions in order to carry on a conversation about daily activities, friends and family, preferences, school life, and more; 2) understand the main ideas of some short, simple authentic texts; and 3) use a series of sentences to make presentations about familiar topics. In order to reinforce students' listening and speaking abilities, short Chinese films and video clips are integrated into the curriculum. A variety of Chinese cultural elements such as music, movies, poetry, arts, cuisine, and pop culture will also be introduced. (1 credit)

Chinese 3
Grades 9-12
In this intermediate course, students will develop a greater understanding of Chinese culture and daily life and continue building a solid foundation of the four language skills – listening, speaking, reading, and writing. By the end of this course, students should achieve proficiency levels in the intermediate low to intermediate mid range as defined by the American Council on the Teaching of Foreign Languages. They should be able to 1) carry on a longer conversation about friends, family, home, daily life, interests, personal opinions, preferences, and more; 2) ask and respond to questions giving some explanations; 3) give a presentation on a topic of personal interest or experience; 4) tell a story that includes some details and descriptions; and 5) write about one's daily life, interests, and experiences in a series of sentences and short paragraphs. In order to develop students' listening and speaking ability, songs, short Chinese movies, television shows, and video clips will be integrated into the course curriculum, in addition to a variety of other cultural elements such as poetry, arts, cuisine, and pop culture. (1 credit)

Chinese 4 (Advanced)
Grades 9-12
This is an intermediate-advanced language class that aims to lay a solid foundation in language form and accuracy for students. By the end of this course, students should achieve proficiency levels in the intermediate mid to intermediate high range as defined by the American Council on the Teaching of Foreign Languages. The students will be able to 1) initiate and maintain an extended conversation with ease and confidence about work, school, recreation, personal interests and areas of competence; 2) discuss events that happened or will happen; 3) write short compositions on topics of interest; 4) use sequencing and transition words to connect sentences into paragraphs; and 5) write about an event in different time frames. Reading and audio materials are provided and discussed. In order to develop students' listening and speaking ability, short Chinese movies, television shows, and video clips will be integrated into the course curriculum. (1 credit)
Students must have achieved said level of proficiency, an 85% or above, and/or department approval to be promoted to the next level.

Chinese 5 & 6 (Advanced)
Grades 9-12
This course is designed for students with advanced level training but who need some further refinements on pronunciation, grammar, and vocabulary usage. This course also stresses oral discussion and accuracy of language performance. By the end of the course, students are able to sustain a conversation on a wide variety of topics, to ask and respond to a variety of questions, make recommendations, describe in detail and narrate in all major time frames, and handle a complicated or unexpected event. By the end of the year, students are expected to have mastered the 650-800 most commonly used characters and to have the ability to express themselves coherently in a series of sentences. Writing and oral presentations in Chinese are required in the classroom. In addition, this course will provide students a broader perspective on Chinese culture, more up-to-date language components, such as authentic linguistic materials. New illustrations are introduced to reflect cultural life in the dynamic and rapidly changing contemporary China. By the end of this course, students should achieve proficiency levels in the intermediate high to advanced low range as defined by the American Council on the Teaching of Foreign Languages. (1 credit)
Students must have achieved said level of proficiency, an 85% or above, and/or department approval to be promoted to the next level.

FRENCH

French 4 (Advanced)
Grades 9-12
The objective of this course is to develop students' proficiency in the French language to the intermediate level in all four skills of second language acquisition: listening, reading, speaking, and writing. This course systematically reviews previously learned grammar concepts and concludes the study of French grammar with an in-depth study of the subjunctive mood. Students will expand their knowledge of vocabulary and begin the reading of authentic literature from Francophone writers. Aspects of the current history and culture of the Francophone world will be examined through students' adoption of a country to study all year long. The study of art, film, and music as cultural texts will be introduced. (1 credit)
Students must have achieved said level of proficiency, an 85% or above, and/or department approval to be promoted to the next level.

French 5 & 6 (Advanced)
Grades 9-12
This course is intended to help students develop a high level of proficiency in each of the four skills of second language acquisition: listening, reading, speaking, and writing. It is a seminar equal to a fifth or sixth semester college-level French course. The spiraling curriculum focuses on integrating each of the aforementioned skills to communicate verbally and in writing at an advanced level. This course is conducted exclusively in French and the students are required to communicate in a total immersion setting. Throughout the year, students are exposed to authentic audio and video recordings, films, and literature intended for native speakers. Furthermore, they will study the current events of French-speaking countries and engage in routine presentational tasks. (1 credit)
Students must have achieved said level of proficiency, an 85% or above, and/or department approval to be promoted to the next level.

LATIN
Since classical Latin is no longer a spoken language, less emphasis is put on mastery of conversational skills. Although Latin is employed in oral exercises, most of the class is conducted in English. The study of Latin culminates with a student's ability to translate the original works of Latin authors and to appreciate them in the appropriate contexts of history, literature, and philosophy. Latin is by nature interdisciplinary, and students will tackle big questions like "What is a meaningful life?" and "What is the nature of the universe?" as they progress through our program. By studying Latin, students are invited into a millenia-long dialogue happening within these classical texts.

Latin 1
Grades 9-12
This course aims to give the student the broadest understanding of the classical world. Primarily, we will study the Latin language and many of its intricacies. A more complete understanding of English grammar will facilitate our transition to Latin's unique structure. Students will simultaneously study the more intriguing aspects of ancient life and the impact it has in our own culture. Topics of interest include literature, history, religion and mythology, philosophy, art, and archeology. Our primary textbook in this endeavor will be *Latin for the New Millennium*, however we will draw topics, projects, and exercises from many sources. (1 credit)

Latin 2
Grades 9-12
Latin 2 marks a transition from studying grammar and syntax to reading original, unadapted Latin texts. Students will be introduced to more complex structures of Latin syntax, they will increase their vocabulary, and strive towards greater fluency in translations. The primary text through the first semester will continue to be *Latin for the New Millennium*. Then, students develop their extensive reading knowledge through novellas that expose students to various structures in a repetitive and digestible format that strengthens memory and comprehension.

As students become comfortable reading more intricate Latin, they will abandon their textbooks and begin reading Julius Caesar's *Commentarii de Bello Gallico*, a first-hand account of Caesar's campaigns through Gaul and Britain written by the general himself. Students will quickly discover that reading original Latin can be quite unlike reading sentences from a textbook. It requires a comprehensive understanding of the language, rather than a topical one. It is more challenging, but also far more rewarding. As students traverse the text, they will study Roman history and culture in greater detail, especially as it pertains to the life and times of Julius Caesar. (1 credit)

Latin 3
Grades 9-12
This course marks a transition in the study of the Latin language. Many of the major grammatical and syntactical topics have now been covered, and students can begin to explore the language on their own terms. The focus shifts from learning through a textbook to reading original Latin texts and examining the history and culture surrounding each work. The first semester is spent reading Cicero and Sallust's accounts of the Catilinarian Conspiracy. During the second semester we read selections from Ovid's *Metamorphoses*. This is a poetic work chronicling many of the most famous stories of Greco-Roman mythology. Legends of passionate love, terrible anger, and unspeakable sorrow are brought together by the common theme of transformation. Here we will read the stories of Daphne, Narcissus, Niobe, and other gods and heroes of ancient myth. (1 credit)
This curriculum alternates annually with the Latin 4 curriculum below.

Latin 4 (Advanced)
Grades 9-12
Since Homer first sang of the wrath of Achilles, poetry has been an enduring phenomenon inspiring the foundations of western culture. There is no greater medium for expressing the power of a single word, the profundity of a thought, or the magnificence of a legend. Throughout the ages, poetry has been inextricably linked with love, faith, delight, sorrow, and, most notably for ancient authors, politics. This course will focus on reading Vergil's most celebrated work, the *Aeneid*. The *Aeneid* is an epic work in the style of the Greek poet, Homer. Its beauty and precision are matched only by its awesome power as a political instrument. Other historians, poets, and writers, both ancient and modern, will give us a more complete picture of this era of transformation and its lasting impact on the world. (1 credit)
This curriculum alternates annually with the Latin 3 curriculum above. Students must have achieved said level of proficiency, an 85% or above, and/or department approval to be promoted to the next level.

Latin 5 & 6 (Advanced)
Grades 9-12
The great works of classical literature stand on their own, but much of their significance can only be fully appreciated when understood within the greater realm of works spanning over many centuries. The intent of this course is to introduce advanced Latin students to a broad range of authors and genres that comprise various periods of Latin literature. Identifying the interrelations and tracking the evolving spirit of Romanitas among these diverse authors and works will lead to greater appreciation for the scope and significance of classical literature. Works read in this class are largely determined by students' particular interests and experience, though emphasis is also put upon expansion of repertoire. The class itself runs as a seminar with heavy emphasis upon translation, analysis, and scholarship. Works we have read in the past include those of Catullus, Horace, Vergil, Lucretius, Pliny, Cicero, and Livy. We have also included authors from Late Antiquity (e.g., St. Augustine, Jerome, etc.) as well as the Middle Ages. (1 credit)
Students must have achieved said level of proficiency, an 85% or above, and/or department approval to be promoted to the next level.

SPANISH

Spanish 1
Grades 9-12
This beginning course will introduce students to the basic principles of the Spanish language. Students will develop all four linguistic competencies: listening, speaking, reading, and writing. At the end of the year, students will be able to participate in short conversations in Spanish and to read simple narratives in the language using the present tense with a high degree of proficiency. Students will be introduced to the many and different cultures of Spanish-speaking countries. Listening and speaking exercises, integration of technology applications, and authentic videos will supplement this course. At the completion of this course, students should achieve proficiency levels of novice mid to novice high as defined by the American Council on the Teaching of Foreign Languages. (1 credit)

Spanish 2
Grades 9-12
This course is a sequential continuation of Spanish 1. Students will continue to refine listening, speaking, reading, and writing skills and deepen their understanding of grammar, vocabulary, and culture. Emphasis will be placed largely on the tenses of the indicative mood, although some attention will be given to the imperative mood. This increased knowledge of grammar combined with a more extensive vocabulary will strengthen the student's ability to communicate in Spanish. Classes will incorporate various readings, including short stories and newspaper articles. Students will also listen to and analyze songs, watch video clips, write short compositions and engage in regular classroom discussions. In addition to a more advanced understanding of Spanish at a linguistic level, students will examine the geography, history, and arts of the Spanish-speaking world. At the completion of this course, students should achieve proficiency levels of novice high to intermediate low as defined by the American Council on the Teaching of Foreign Languages. (1 credit)

Spanish 3
Grades 9-12
This course builds on the foundational linguistic and cultural competencies acquired in Spanish 1 and 2. Students will continue to build vocabulary through more advanced interpretive activities as well as engage in real-life interpersonal/intrapersonal/presentational tasks in every unit covered. In terms of structural language, students will learn the remaining tenses of the indicative mood and develop a fundamental understanding of the subjunctive. They will also begin to express more complex ideas both in written and oral dimensions, expressing their feelings and opinions in a concise manner. Students completing this course should achieve proficiency levels in the intermediate low to intermediate mid-range as defined by the American Council on the Teaching of Foreign Languages. (1 credit)

Spanish 4 (Advanced)
Grades 9-12
The objective of this course is to develop students' proficiency in the Spanish language to the intermediate level in all four skills of second language acquisition: listening, reading, speaking, and writing. This course systematically reviews previously learned grammar concepts and concludes the study of Spanish grammar with an in-depth study of the subjunctive mood. Students will expand their knowledge of vocabulary and begin the reading of authentic literature from Hispanic writers. Furthermore, aspects of Latin American and Spanish current history and culture will be examined through a student's adoption of a country to study all year long. The study of art, film, music, as well as cultural texts, will be introduced. (1 credit)
Students must have achieved said level of proficiency, an 85% or above, and/or department approval to be promoted to the next level.

Spanish 5 & 6 (Advanced)
Grade 9-12
This course is intended to help students develop a high level of proficiency in each of the four skills of second language acquisition: listening, reading, speaking, and writing. It is a seminar equal to a fifth or sixth semester college-level Spanish course. The spiraling curriculum focuses on integrating each of the

aforementioned skills to communicate verbally and in writing at an advanced level. This course is conducted exclusively in Spanish and the students are required to communicate in a total immersion setting. Throughout the year, students are exposed to authentic audio and video recordings, films, and literature intended for native speakers. Furthermore, they will study the current events of Spanish-speaking countries and engage in routine presentational tasks. (1 credit)
Students must have achieved said level of proficiency, an 85% or above, and/or department approval to be promoted to the next level.

INDEPENDENT RESEARCH

Students who have completed the full program of study in a department may design an independent study to continue to pursue that subject in greater depth.

Independent Study (Advanced)
Grades 10 - 12
Computer Science Independent Study (Adv)
Math Independent Study (Adv)

These courses are designed to provide motivated students space in their course of study to pursue additional coursework beyond their Westtown offerings in Math, Computer Science, and World Language. Independent work is the heart of this course. Students will identify a mentor in their field of study as a primary resource and guide. Students will meet individually with a department chair or department mentor on a bi-weekly basis. (½ credit)

COLLEGE COUNSELING

Westtown's College Counseling Department works with all students in the next step of their education: researching and applying to colleges, and making their ultimate decision. They work with each student as an individual and emphasize finding the best fit. Westtown graduates are well prepared for and have chosen many different options, evidenced by the diversity of Westtown's matriculation list, which is on the Westtown website. The most successful students in the college process are those who work hard, pursue classes and activities that interest them, and know themselves well. College counselors begin talking with students early in Upper School about how best to prepare for college and the application process.

Starting in ninth grade, college counselors give programs for students and parents and send regular newsletters. Tenth graders have similar programming and the opportunity to meet with counselors toward the end of the year. The college process gains momentum in the junior year, with additional programming for families and students, including Junior Seminar, a class focused on researching and applying to college, which meets weekly in the second semester of junior year. At this time, students will also be assigned their own college counselor and families can consult their counselor for individual meetings and concerns throughout the process. Senior Seminar continues the college application process in the senior year and finishes in the spring of the senior year with preparation for college living. Every other year, Westtown's Equity and Access Conference and College Fair is a signature event that all families, as well as hundreds of students from other independent schools and community-based organizations, are invited to attend. In the end, 100 percent of our seniors are admitted to and attend college, sometimes taking a gap year first. Because of our thoughtful, supportive process, they feel secure in their choices.

DISTINGUISHING PROGRAMS

Westtown students live and learn alongside students from around the world. In addition to the dynamic global community that is our student body, we also offer a number of innovative programs that are unique to Westtown and reinforce the global competencies we expect of all our graduates. The selection of programs below demonstrates some of the opportunities available in our program.

DEEP DIVE CERTIFICATE PROGRAM

The Deep Dive Certificate Program challenges students to grow as leaders, to "become the change they want to see," and to lead others in developing a better world. Our Deep Dive Programs promote an interdisciplinary lens through which students design and experience their education. Students in 10th,11th, and 12th grades who join this program create a focused, in-depth exploration of an area of passion across a number of subjects.

Westtown offers Deep Dive Certificates in five areas:

- Multidisciplinary Arts
- Data-Driven Change
- Diversity, Equity, Inclusion, and Social Justice
- Global Citizenship
- Social Entrepreneurship
- Sustainability Leadership

While each program area has a different focus, all share a common framework:

- Each Deep Dive has a set of academic requirements that may be met as students fulfill course requirements for graduation.
- Students must complete interdisciplinary projects over their junior and senior year from within other courses in their individual academic programs. For instance, a student in Latin American History may focus a research assignment on land use and degradation in the Caribbean as a part of her Deep Dive in Sustainability Leadership.
- The Deep Dives include an off-campus immersion experience. Students may satisfy this part of the program through their Senior Project or fulfilling their service requirement. They may also choose another means of immersion.
- Over their junior and senior years, students will build a portfolio of work. In collaboration with the program director, students will create and complete a capstone project that demonstrates authentic action-based learning, ties all of the certificate experiences into a reflective whole, and demonstrates Westtown's Global Competencies: Leadership and Collaboration; Ethical and Cultural Sensibility; Scientific and Analytical Literacy; Communication; Creativity; and Information Literacy.

INTERNATIONAL STUDENT PROGRAM

Our community is enriched by a number of students who join Westtown from around the world. We are fortunate to have a global microcosm on our campus as a result.

Distinguishing Features:

- Diverse community of students from a variety of countries
- Support of the international student community by two Co-Directors of the International Student Program
- Welcome and orientation of new international students and families at the start of the year; support and communication with families throughout the year
- International students events during the year, including the International Festival, Lunar New Year Celebration, Host Family events, and day trips to Philadelphia and other nearby cities
- English language assessment and course placement recommendations for new international students; individual English Language learning support coordinated by our Learning Center
- Host Family Program that matches new international students with local host families
- Support of logistics for international students, including travel arrangements and TOEFL testing

LEADERSHIP & EXPERIENTIAL LEARNING

- **LEADERSHIP OPPORTUNITIES:** Westtown has many leadership positions including the Student Body Presidents, Work Program heads, chief prefects, prefects, proctors, peer tutors, writing fellows, class officers, Weekend Program heads, and team captains. In all of these positions, students work closely with adults and their peers to actively consider what it means to lead at Westtown and in the rest of society. These experiential positions afford students the opportunity to learn about their leadership and to hone effective leadership skills, for use at Westtown and beyond high school.

- **QUAKER LEADERSHIP PROGRAM**: The Quaker Leadership Program seeks to deepen students' spiritual lives, develop friendships, and teach effective Quaker leadership skills. Seminars teach students how to clerk a business meeting, how to provide effective vocal ministry, and how to lead social justice activities such as fair trade practices. This program has developed a strong sense of community and identity for our Quaker students, and has enhanced the leadership skills of all students who attend.

- **ORGANIC FARM:** Students participate in planting and harvesting vegetables from our on-campus organic farm, helping to provide fresh food for our community in the fall and spring terms. Class gardening projects and harvest celebrations bring the community together at the farm.

- **SERVICE LEARNING:** Service learning integrates community service work with academic learning, both inside and outside the classroom. Students engage in community service in a variety of ways: in afternoon and weekend programs and in individual classes.

- **WORK PROGRAM:** Work Program reaffirms the value of service to others and the dignity of all work. All Upper School students complete a variety of work experiences, including janitorial and kitchen jobs. Students exhibiting excellent leadership skills may also be selected as a captain of a work crew for at least one work cycle, gaining valuable experience in leadership and management of a team working toward a common goal.

CO-CURRICULARS

Westtown's co-curricular program is rooted in the values of teamwork and collaboration. All Upper School students are required to take part in the co-curricular program and participate in activities that emphasize skill building, communication, performance, and individual and community-based growth. Through this program students come to understand their own strengths and the role they play in a group. Additionally, students learn the importance of lifelong fitness and the benefits of physical activity. Most co-curricular activities require students to demonstrate their skills through some performance based activity such as an athletic competition, a theater performance, or an outdoor leadership trip. The variety of co-curricular offerings allows students to select activities that pertain to their interests and passions.

Co-curriculars run on a trimester schedule with a fall, winter, and spring season. Activities are organized into three different categories: Interscholastic Athletics, Lifelong Fitness, and Collaborative activities. Students are required to complete activities from different categories based on their division and grade. They must participate in a co-curricular activity each season. Please note that some activities fall into multiple categories. Interscholastic athletic teams, for example, meet the criteria for each of the three categories. *(See co-curricular chart on page 4.)*

Ninth grade students and new tenth grade students are required to participate in at least one interscholastic athletics team. Westtown recognizes the power of sports to teach students how to take positive risks, achieve individual and team goals, and gain self-confidence and discipline. Our wide-ranging

interscholastic athletic program welcomes students of all proficiency levels, whether they are a varsity-level player, someone who simply thrives on competition, or a newcomer to competitive sports.

The Upper School co-curricular program allows students to begin to specialize in different areas and refine their skills in activities that are of interest to them.

- Ninth grade and new tenth grade students must participate in one interscholastic athletic team, while their other two seasons can be a combination of interscholastic athletics, lifelong fitness, or collaborative activities.
- Tenth grade students returning to Westtown, eleventh grade, and twelfth grade students must participate in one lifelong fitness activity per year, while their other seasons can be a combination of interscholastic athletics, lifelong fitness, or collaborative activities.

Students who participate in an intensive athletic or arts program outside of Westtown, such as gymnastics, horseback riding, club sports team, or participation in an external theater program, may apply for a co-curricular adjustment. Students and their parents must complete the co-curricular adjustment form and arrange for private transportation to these activities. These requests will be evaluated and reviewed by the Athletic Director and the Visual and Performing Arts Department Chair.

ACADEMIC RESOURCES

Learning Center
The Learning Center is staffed by two Learning Specialists who work collaboratively with classroom teachers and Class Deans to create pathways to help students understand their learning strengths and to achieve academic success. Their goal is to help students leverage their own strengths as learners and to develop the tools to learn independently and inquisitively. The Learning Center is open to all students in the Upper School during the school day, either through individual meetings to troubleshoot an area for improvement, to create an approach to breaking down a long-term project into manageable steps, or to talk through new learning strategies. Students may drop in or schedule appointments during free periods. Our Learning Specialists also oversee a team of peer tutors who provide one-on-one help in a variety of subjects and can refer students and families to approved private tutors. Students who identify as English Learners may opt-in to support from the Learning Center, which coordinates the English Language Learner Team.

The Learning Specialists also work closely with the school counselors, counseling externs and the school psychologist, as well as the College Counseling Office to counsel families about appropriate documentation for students with learning style differences and others who may qualify for accommodations in the classroom or in standardized testing settings. In order to ensure equitable access to Westtown's educational programming, the Learning Center develops Learning Support Plans outlining accommodations and instructional support strategies for students with diagnosed learning disabilities or other health needs. Academic accommodations are designed to provide students with learning differences the appropriate scaffolding they need to fully engage in their academic program within the context of our core curriculum and graduation requirements, and with a plan to prepare for increased independence over time. Eligibility for accommodations will be determined after comprehensive review of documentation from a qualified clinician by the Learning Center staff, and determined on a case-by-case basis. Existence of a diagnosis alone does not guarantee accommodations.

Math Lab and Peer Tutoring: The Math Department offers help during free periods and evenings in the Math Lab, staffed by math teachers and peer tutors. The Math Lab fosters a culture of collaboration and support. Students who need help often benefit from meeting with their own teacher or a different teacher to talk through ways to approach a math topic they are working on. Often students find they learn best by talking it out or by hearing an approach from a new voice in the Math Lab setting. Students who wish to discuss interesting math topics or challenging problems outside of their specific math class are also

welcome to stop in Math Lab. In addition to help from math teachers, peer tutors work closely with the Math Department to support students who request help.

Writing Center and Writing Fellows Program: The Writing Center provides additional support for students in all stages in the writing process for individual class assignments across different subject areas. English Department faculty as well as student Writing Fellows guide students with suggestions to enhance their written voice through brainstorming, drafting, and encouraging writers to proofread their work aloud. Students can request help with writing for any class, for college essays, research, and service proposals. In addition, the Writing Center provides a resource to encourage the art and craft of writing.

AP TESTING POLICY

Westtown students may take the following AP exams (see chart below), provided they are enrolled in or have completed the relevant course(s) at Westtown or, in rare exceptional cases, obtain approval from the Dean of Academics and Director of College Counseling for a credit-bearing, graded course taken at an accredited school outside of Westtown. Note that Westtown courses are not AP classes, and additional preparation beyond taking the Westtown course may be necessary to earn a high score. Students must also communicate with their relevant subject teachers about their plan to test prior to registering.

Full Access students should see Debra Weaver and Jay Farrow for assistance with testing fees.

AP Exam	Westtown Course(s)
Calculus AB	Calculus 1 Adv or Calculus 1 and additional study
Calculus BC	Calculus 2 Adv
Chemistry	Chem 1-2, Chemical Reactions, Chemical Bonding, and additional study
Chinese Language and Culture	Chinese 5 or 6
Computer Science A	Computer Science 1 (Adv) and additional study
English Literature and Composition	American Literature and World Literature
Environmental Science	Environmental Science 1 (Adv), Environmental Science 2 (Adv), and additional study.
French Language and Culture	French 6 and additional study
Latin	Latin 4 and significant additional study
Macroeconomics	Macroeconomics and additional study
Microeconomics	Microeconomics and additional study
Physics 1: Algebra-Based	Physics 1 and 2 with additional study. See physics teacher for guidance.
Physics 2: Algebra-Based	Chemistry 1 and 2, Electricity & Magnetism, Modern Physics, and additional extra study. See physics teacher for guidance.

Physics C: Electricity and Magnetism	Electricity & Magnetism; Calculus is also helpful.
Physics C: Mechanics	Physics 1 and 2; Calculus is also helpful.
Spanish Language and Culture	Spanish 5 or 6
Spanish Literature and Culture	Spanish 5 or 6
Statistics	Statistics and additional study
Studio Art Drawing	Full year of art classes as a sophomore or junior and current enrollment in Studio Art Forum (Adv)
Studio Art 2-D Design	Full year of art classes as a sophomore or junior and current enrollment in Studio Art Forum (Adv)
Studio Art 3-D Design	Full year of art classes as a sophomore or junior and current enrollment in Studio Art Forum (Adv)
U.S. History	U.S. History and additional study
World History	Two semesters of World History and additional study

The following AP tests include significant material not taught in Westtown courses. If a student would like to take one of these tests, they must ask the Dean of Academics and Director of College Counseling for approval. The student must be enrolled in a credit-bearing course approved by the Dean of Academics and Director of College Counseling.

- Art History
- European History
- English Language and Composition
- German Language and Culture
- Government and Politics (Comparative)
- Government and Politics (U.S.)
- Human Geography
- Italian Language and Culture
- Japanese Language and Culture
- Music Theory
- Psychology

The following AP tests cannot be accommodated by Westtown faculty, college counseling, and test administrators because they require additional assessments:

- AP Seminar
- AP Research
- Computer Science Principles

STUDY ABROAD

On rare instances, a student may request permission to attend a school year abroad at an approved for academic credit. Approved programs offer a strong academic curriculum, robust college counseling program and a full boarding program. Students must meet with the Dean of Academics and submit a proposal to the Department Chairs committee prior to re-enrollment if seeking to pursue this option.

FOR ADDITIONAL INFORMATION

Visit our website at **www.westtown.edu**

Contact the Upper School Office
(currently enrolled Upper School families)
P: 610.399.7700

Contact the Admissions Office
(prospective families)
P: 610.399.7900