

WESTTOWN SCHOOL

UPPER
SCHOOL
CURRICULUM
GUIDE

2021-2022



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WESTTOWN SCHOOL

Upper School Curriculum 2021-2022

OVERVIEW

The Westtown Upper School curriculum challenges students to discover their intellectual strengths and to develop the skills needed 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

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. 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 March and April. Department Chairs, Class Deans, and the College Counseling team also review proposed course plans in the spring term. 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. Materials about course planning are posted on My Westtown Resource Boards.

Recommended Course Load:

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

English: Perspectives in Literature	Science: Physics 1 and Chemistry 1
History: Peace and Justice	Religion: Quakerism in Life and Practice
Language: Chinese, Latin, Spanish 1, 2, 3, French 2,3	Health: Health and Life Skills
Math: Algebra 1, Geometry, or Algebra 2	Art, Music, or Theater

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

English: American Literature	Science: Biology 1 and Biology 2
History: U.S. History	Religion: World Religions 1
Language: Chinese, French, Latin, Spanish 2, 3, 4	Art, Music, or Theater
Math: Geometry, Algebra 2, Precalculus or Functions	

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

English: Contemporary World Literature Elective Semester 2	Science: Chemistry 2, Physics 2
History: Elective choices	Religion: World Religions 2
Language: Chinese, French, Latin 2, 3, 4	Art, Music, or Theater
Math: Algebra 2, Precalculus or Functions, Calculus	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: Chinese, French, Latin 3, 4, 5	Art, Music, or Theater
Math: Precalculus or Functions, Calculus, Statistics	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 credits
English	4 credits <i>Perspectives in Literature, American Literature, Contemporary World Literature, The Essay, Two electives</i>
Health	.5 credits
History	2 credits <i>(3 recommended)</i> <i>Peace and Justice and U.S. History required</i>
Math	3 credits in grades 9-12 <i>(4 recommended)</i> <i>Algebra 1, Geometry, Algebra 2, Precalculus or Functions</i>
Religion	1.75 credits <i>Quakerism, World Religions 1, World Religions 2, Elective</i>
Science	2 credits <i>(3 recommended)</i> <i>Physics 1, Chemistry 1, Biology 1 and 2, Physics 2 and Chemistry 2</i>
World Languages	2 credits in grades 9-12 <i>(3 years recommended in one language in grades 9-12)</i> <i>Chinese, Latin, Spanish 1, 2, 3, French 2,3</i>
Co-Curricular activities:	Every Term: 4 years
Community Life Boarding Program	11th and 12th grade Boarding <i>(Students enrolled by grade 7, boarding is optional)</i>
Experiential Learning & Service	Service - 40 hours

CO-CURRICULARS

2021-2022

FALL	WINTER	SPRING
Interscholastic Athletics	Interscholastic Athletics	Interscholastic Athletics
Cross Country	Basketball	Baseball
Field Hockey	Indoor Track	Golf
Soccer	Swimming	Lacrosse
Tennis	Wrestling	Softball
		Tennis
		Track & Field
Athletic Conditioning	Athletic Conditioning	Athletic Conditioning
Swimming Training	Indoor Field Hockey Training	Tennis Training
Tennis Training	Lacrosse Training	Strength & Conditioning
Wrestling Training	Baseball Training	Yoga
Basketball Training	Strength & Conditioning	
Strength & Conditioning	Yoga	
Performing Arts	Performing Arts	Performing Arts
Dance	Dance	Dance
Theater: Fall Play	Theater: One-Act Lab	Theater: Spring Play
Theater: Scenic Arts Design	Theater: Scenic Arts Design	Theater: Scenic Arts Design
Experiential Activities	Experiential Activities	Experiential Activities
Outdoor Leadership (Adv)	Robotics	Outdoor Leadership
Service Network	Service Network	Service Network
Gardening		Gardening

9th grade Three co-curricular seasons (at least two interscholastic sports teams)
 10th grade Three co-curricular seasons (at least two interscholastic sports teams)
 11th grade Three co-curricular seasons (at least one interscholastic sports team)
 12th grade Three co-curricular seasons (at least one interscholastic sports team)

CURRICULUM-AT-A-GLANCE

2021-2022

Arts 1.5 credits	Art: Intro to Studio Art: 2D Intro to Studio Art: 3D Ceramics 1, 2 Drawing & Painting 1, 2 Photography & Digital Art 1, 2 Sculpture 1, 2 Studio Art (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) Digital Music & Production 1, 2 Intro to Guitar Applied Music 1, 2, 3 (Adv), 4 (Adv)		Theater: Elements of Theater 1, 2 Acting Workshop Theater Arts (Adv) Performing Arts Tutorial (Adv)
Engineering and Computer Science	Foundation Skills: Computer-Aided Design Intro to Programming Intro to Mechanical Engineering Human-Centered Design		Interdisciplinary Exploration: Web Development Dynamic Application Development Design Engineering		Advanced Applications: Design Engineering Solutions 1 (Adv), 2 (Adv) Computer Science 1 (Adv) Computer Science Research (Adv) Data-Driven Change Deep Dive
English 4 credits	Required Courses: Perspectives in Literature (9th) Contemporary World Literature (11th) The Essay (12th) American Literature (10) Elective (11th) Elective (12th)			Electives: Classical Connections with Modern Literature Harlem Renaissance Dystopian Literature Writing with Power	
Health .5 credits	Required Courses: Health & Life Skills Junior Seminar Senior Seminar				
History 2 credits	Required Courses: Peace & Justice U.S. History		Electives: Contemporary Affairs Genocide Studies 1 Genocide Studies 2 Latin-American Experience Microeconomics Macroeconomics Modern Latin-American Experience World History 1300-1800 World History 1800-2000		
Math 3 credits	Required Courses: Algebra 1 Geometry Algebra 2	Recommended for all: Precalculus or Functions with Math Modeling	Electives: Calculus 1 Calculus 2 (Adv) Linear Algebra (Adv) Multivariable Calculus (Adv) Statistics Computer-Aided Design Intro to Programming Website Development Mobile Application Development Computer Science 1		
Religion 1.75 credits	Required Courses: Quakerism in Life & Practice World Religions 1: Judaism & Christianity World Religions 2: Hinduism, Buddhism, Islam			Electives (required to take one): Environmental Justice Religion, Gender, & Sexuality Religion, Resistance, & Revolution	
Science 2 credits	Required Courses: Physics 1 & Chemistry 1 Biology 1 & Biology 2	Biology Electives: Anatomy & Physiology (Adv) Biology of Disease	Physics Electives: Digital Electronics Electricity & Magnetism (Adv) Modern Physics (Adv)	Research: Scientific Research (Adv)	Recommended for all: Physics 2 & Chemistry 2
		Chemistry Electives: Applied Chemistry Chemical Bonding (Adv) Chemical Reactions (Adv)	Environmental Science Electives: Environmental Science 1, 2 Environmental Research (Adv)	Engineering Electives: Design Engineering 1, 2	
World & Classical Languages 2 credits	Required Courses: 2 years of the same language in grades 9-10: Chinese, Latin, or Spanish 1, 2, French 2,3			Recommended: at least one additional year: 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, CAD, Sculpture, and Woodworking that partners well with students pursuing interests in 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	Digital Music 1
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)	Digital Music 1, 2
Sculpture 1, 2	Intro to Guitar
Woodworking 1,2, 3 (Advanced)	
Studio Art Forum (Advanced)	
Elements of Theater 1, 2	
Acting Workshop	
Theater Arts (Advanced)	
Performing Arts Tutorial (Advanced)	

THEATER

Elements of Theater 1-2

Grades 9-12

Through a series of creative hands-on projects and seminar-style discussions, this course examines the major elements of theater including: acting, directing, design (costumes, lighting, scenery), dramatic literature, and history. Students will explore the breadth of theater elements from the perspective of the practitioner, collaborator, and arts advocate. This course is a prerequisite for all courses and does not require students to perform. (½ credit)

Elements of Theater 2

Grades 10-12

This course examines theater practice from a global perspective. Students will broaden their scope of understanding by examining theater practices from a variety of periods and regions. Students will use the elements of theater on a series of collaborative projects. (½ credit)

Prerequisite: Elements of Theater 1

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 work is stressed. We will also read and discuss excerpts from texts by Konstantin Stanislavski, Uta Hagen, Stella Adler, John Barton, and Kristin Linklater among others. (½ credit)

Prerequisite: Elements of Theater 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. Previous topics have included Theater and Social Change, Creative Producing and Devising, Documentary Theater or Ethnodrama, and Musical Theater. (½ credit)

Prerequisite: Elements of Theater 2, 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, audition or portfolio preparation, acting styles, 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) or Acting Workshop and 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 historical and current jazz styles, as well as develop instrument-specific techniques that will enhance their musical and technical proficiency. They will develop skills in the art of improvising, 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 continue their development of musical 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 experience on a string instrument or permission from the instructor

Symphonic Band 1, 2, 3, 4 (Advanced)

Grades 9-12

Students continue their development of musical 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, 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)

Digital Music and Studio Production

Grades 9-12

This course exposes students to the basics of audio recording, editing, mixing, and composition through the use of music software. We will focus on technological literacy and proficiency, digital recording, composition, and critical response. Students will become proficient using a MAC interface and will learn to create and manipulate MIDI files and settings. 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)

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: Western 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 may 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 art forms. Students will explore drawing using graphite, charcoal, and ink, and will become acquainted with the fundamentals of photoshop. 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 structures. Students will experiment with how tools and materials can create forms that have structure, identity, and craftsmanship. They will work with found objects, wood, paper, clay, and plaster, exploring how these materials can create objects that address new concepts or conceptual frameworks and how to describe and analyze their visual impact. Experimentation and exploration of tools and the sharing of information and techniques are part of the artistic process in this class. (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 1 and 2 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 that are well crafted and finished appropriately with colored ceramic surfaces or glazes. The beginning students are encouraged to experiment with a broad range of techniques and concepts. In Ceramics 3, students begin to narrow their craft to focus on individual voice and expertise. The development of three-dimensional forms that express volume, balance, and function or metaphor are an important part of the process of making as well as developing a vocabulary and studio practice that is relevant to clay. (½ credit)

Prerequisite for Ceramics 1: Introduction to Studio Art: 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

Prerequisite for Photography and Digital Art 2: Photography and Digital Art 1

Sculpture 1, 2

Grades 10-12

This one-semester course focuses on the role that experimentation plays with materials and concept in developing objects that reflect a vision or idea. Students will explore traditional materials such as papier mache, plaster, and cardboard, as well as found objects, both natural and man-made. We will examine how personal narrative and interpretation inform the manipulation of materials in creating objects of visual impact. Projects will alternate annually. (½ credit)

Prerequisite for Sculpture: Introduction to Studio Art 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: Intro to Studio Art 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 wood – 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 experiencing 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. The course necessitates an intense commitment of time and effort to produce original artworks of exceptional quality. (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. The rehearsal process focuses on the value of collaboration, ensemble building, personal challenge, and problem solving.

Winter One-Act Theater-making Lab: Students devise, perform, and produce short performances. In this process-driven lab, students develop an interdisciplinary approach to independent theater-making and storytelling.

Spring Musical: Students can participate as actors, dancers, pit musicians, stage managers, and assistant directors in a fully realized musical production. 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 participate as dancers and dance managers in the creation of a dance concert. The dance program provides challenges and opportunities for students to work together in setting goals, overcoming obstacles, and practicing life skills such as communication, conflict resolution, and decision-making with a strong focus in performance, composition, history and culture, and analyzing and critiquing. Students who participate in the spring dance season will 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 backstage design, construction, and engineering elements of theater productions. Students can concentrate on scenery, props, paint, and costumes. Advanced students may be given design opportunities.

Musical Performance Opportunities

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

- The Arts Festival
- 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

ENGINEERING AND COMPUTER SCIENCE

FOUNDATION SKILLS:

Establish skills to support your work in engineering and computer science

Computer-Aided Design
Introduction to Programming: Building with Software
Introduction to Mechanical Engineering: Tools and Fabrication
Human-Centered Design
Introduction to Studio Art: 2D or 3D

INTERDISCIPLINARY EXPLORATION:

Expand skills and gain experience in context

Web Development
Dynamic Application Development
Design Engineering
Drawing and Painting 1, 2
Photography and Digital Art 1,2
Sculpture 1,2
Ceramics 1, 2
Woodworking 1, 2
Digital Music and Studio Production
Theater Design (Scenic Arts Design "SAD"- co-curricular)
Lighting and Sound Design (LAD - club)
Robotics (co-curricular or weekend seminar program)

ADVANCED APPLICATIONS:

Design and deliver solutions that matter

Design Engineering Solutions 1 (Advanced)
Design Engineering Solutions 2 (Advanced)
Computer Science 1 (Advanced)
Studio Art Forum (Advanced)
Data-Driven Change Deep Dive Program
Computer Science Independent Research (Advanced)
Math Independent Research (Advanced)

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 changes. The overall focus of the program is to provide technological and management skills to envision, design, create, and implement solutions to problems that matter.

Course Descriptions:

Foundation courses: Establish basic skills in areas that you will need to support your work in engineering and computer science

Computer-Aided Design

Grades 9-12

Computer-Aided Design (CAD) for engineering, art, and architecture supports students learning (CAD) tools and practices needed in engineering, art, theater, and architecture areas. Students who complete this course use CAD in robotics, theater, architecture, and design work while at Westtown and to prepare for multiple fields of study in college. A substantial final project and presentation is required. (½ credit)

Prerequisites: none

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 libraries and App Inventor are often included. 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 is addressed. (½ credit)

Prerequisites: none

Engineering: 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)

Prerequisites: none

Design: Human-Centered Design

Grades 9-12

This course works at the intersection of design thinking, human-centred design, and entrepreneurship to create solutions addressing social challenges through programs, policy, and products. Students will develop an understanding and mastery of design thinking processes, client-centric project development, critical analysis of impacts and consequences, and tools for communication, collaboration, development of funding streams, and presentation to wider audiences. (½ credit)

Prerequisites: none

Interdisciplinary exploration: Expand skills and gain experiences in context

Web 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: Computer Aided Design or Introduction to Programming, or demonstrated skills from equivalent work, and department permission.

Dynamic Application Development

Grades 10-12

This course provides the experience of creating dynamic applications with distributed components, including a server-hosted database. Such applications work on all mobile devices, including phones, tablets, and laptops. This course is for students with previous coding experience. An appreciation for both strategic work and detailed code development is important throughout this course. Dynamic Application Development is taught using a full HTML/ CSS/ Javascript/ PHP/ MySQL/ SQL 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 as students work on individual, team, and full-class projects. 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*

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, budgeting, and implementation. This course creates collaborative cohorts of students with a range of skills sets and experiences (depending on their choice of introductory course) to design and engineer applied products and solutions to address real-world challenges or needs. This course may be taken with an "advanced" designation by student election and completion of additional final products. (½ credit)

Prerequisite: *Human Centered Design or Computer Aided Design or Introduction to Mechanical Engineering*

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*

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 Introduction to Studio Art: 3D*

Prerequisite for Photography and Digital Art 2: *Photography and Digital Art 1*

Sculpture 1, 2

Grades 10-12

This one-semester course focuses on the role that experimentation plays with materials and concept in developing objects that reflect a vision or idea. Students will explore traditional materials such as papier mache, plaster, and cardboard, as well as found objects, both natural and man-made. We will examine how personal narrative and interpretation inform the manipulation of materials in creating objects of visual impact. Projects will alternate annually. (½ credit)

Prerequisite for Sculpture: *Introduction to Studio Art 3D, Introduction to Studio Art: 2D, 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: Intro to Studio Art 3D, Introduction to Studio Art: 2D, or by department approval

Digital Music and Studio Production

Grades 9-12

This course exposes students to the basics of audio recording, editing, mixing, and composition through the use of music software. We will focus on technological literacy and proficiency, digital recording, composition, and critical response. Students will become proficient using a MAC interface and will learn to create and manipulate MIDI files and settings. 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)

Prerequisites: none

Advanced Applications: Design and deliver solutions that matter

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. The class will collaboratively work to design and build a complete system to solve a real problem, and work towards effective implementation and adoption. The students learn technical project management skills. Following this class challenge, students will 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. Some projects use Arduino and Raspberry Pi technology. Some students develop machine learning/AI applications. 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. Students will lead technical web and mobile application projects. (1 credit)

Prerequisites: Web Development and Dynamic Application Development, or demonstrated strong coding skills from equivalent work, and department permission.

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. Students who have successfully completed Design Engineering and Human-Centered Design may propose to pursue an advanced project without physical deliverables in Design Engineering Solutions. Project proposal ideas 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: Design Engineering for all students, and Human-Centered Design (for non-fabricated project deliverables) or Introduction to Mechanical Engineering (for fabricated project deliverables), and department permission.

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 wood – 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 experiencing 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. The course necessitates an intense commitment of time and effort to produce original artworks of exceptional quality. (1 credit)

Prerequisite: *Permission of the department is required.*

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 scenery and props, paint, and sew costumes 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 work hands-on 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 event planning. 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.

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
- 11th grade Personal Narrative paper: students create and present a personal narrative as a capstone experience
- 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 - Required: one course in Semester 2 in both 11th grade and 12th grade

Harlem Renaissance (Advanced)
Classical Connections in Modern Literature (Advanced)
Writing with Power (Advanced)
Writing with Power
Dystopian Literature

(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

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 writing 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 (English 11)

Grade 11

This course brings together film, literature, discussion, and reflective writing to compose a new worldview beyond American interests. Engaging contemporary stories from Morocco, Algeria, Colombia, Spain, China, Nigeria, Mali, and Ethiopia, the course seeks to foster empathetic global citizenship through exposure to diverse voices and media of storytelling. The course's four key objectives include: (1) decentralizing American and Eurocentric perspectives, (2) surveying stories in both print and digital media, (3) striving for representation amongst students in a multicultural classroom, and (4) empowering students to use their knowledge to become curious and compassionate storytellers themselves. Major assignments include literary analysis essays, a personal narrative paper, and a creative project as well as student-guided discussion of the reading. (½ credit)

The Essay (English 12)

Grade 12

This course introduces students to models of writing which will sustain them in the years ahead—whether they seek to communicate a strong opinion on a topic, analyze a collected body of literary work, or examine their own experience through reflection and writing. Students begin the course with the study of essays by classic and contemporary authors, practice writing using a variety of models and approaches to broaden their communication styles and abilities, and focus on the college essay. The course culminates with 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.

Classical Connections: Ancient Stories in the Modern World (Advanced)

Grades 11-12

The stories, images, and myths of the ancient world shape our collective imagination and storytelling, whether you have read Classical texts or not. This course asks the question: what makes the Classics so—classic? Why does art, literature, and film in the 21st century continue to tell the stories of more than 2,000 years ago? In order to answer these questions, the class will read texts from Homer, Sophocles, and Ovid, among other short selections, to understand the stories as they were originally written and intended. The course will conclude with an exploration of representations of these stories in contemporary film, art, and pop culture, ranging from Freud's psychoanalysis and H.D.'s poetry to Cohen brothers' films and Jay-Z lyrics. (½ credit)

Prerequisite requirement: 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.

Dystopian Literature

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. 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)

Harlem Renaissance (Advanced)

Grades 11-12

This course introduces students to the uniquely creative cultural movement which took place among Black Americans in Harlem during the 1920s and 30s. The curriculum explores the historical, geographic, political, and theoretical contexts of the period before diving into an examination of some of the written work which came from and was inspired by the movement. Selections from authors Jean Toomer, Alain Locke, Wallace Thurman, James Weldon Johnson, Zora Neal Hurston, and Carl Van Vechten, and poets Langston Hughes, Countee Cullen, Claude McKay, Gwendolyn Bennett, Georgia Douglas Johnson, and Helene Johnson may be included in this advanced course in American Literature. (½ credit)

Prerequisite requirement: 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.

Writing with Power: Journalism and Media Fluency (with Advanced Option)

Grades 11-12

Through the study of journalism across multiple platforms, students in this course will create articles, broadcasts, podcasts, and self-published magazines. They will follow major news stories in local, national, and international news, and be challenged to parse and evaluate the quality and validity of the content they consume. As part of their study, students will explore new modes of writing and communication in multimedia environments. They will begin with the tenets of journalistic writing and learn the inverted pyramid writing process as they create breaking-news-style articles. From there, students will practice 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 content as students create podcast episodes and self-published photo-centric 'zines. (½ credit)

The class will offer an advanced course option which will have additional writing and publishing requirements in Westtown publications and beyond. Enrollment in the advanced course requires department approval and consultation with the course instructor throughout the semester. (½ credit)

Requirement for advanced option: 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

All international students 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 placed or opt into English Language Enrichment (ELE).

English Language Enrichment (ELE) is an individualized course of study designed to provide communications support to students for whom English is not their first language. ELE faculty use TOEFL or Duolingo scores, in-person interviews, 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. (course is not for credit)

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

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 a personality/learning style inventory and a draft of 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 issues facing the seniors as they plan their transition to college: social and community responsibility, personal health and wellness, independent living, 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 the war 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 U.S. History *	
Electives	
World History 1300-1800* World History 1800-2000* Contemporary Affairs* Genocide Studies 1* Genocide Studies 2*	Latin American History* (summer only) Latin-American Experiences* (summer only) Microeconomics Macroeconomics

*Advanced Option Available

Course Descriptions:

Peace and Justice

Grades 9-10

This course examines historic and present-day human rights injustices, both in the U.S. and globally. Later, it addresses social change movements, including very recent examples, used to counter these injustices. Current events, primary and secondary sources, and films all provide material for the course. Classroom activities include role playing, simulations, case studies, debates, small-group work, as well as whole-group discussion. In the spring term, students develop a research project that educates and engages them in creating meaningful change on a topic (school community, local, national, global) they choose. Emphasis is also placed on the development of effective study skills: library research, note-taking, outlining, and essay writing. (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 in 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 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

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 US 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

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

Latin-American Experiences (with Advanced option) Grades 11-12

The purpose of this course is to allow students to take an in-depth look into the Latinx experience in the United States. A central theme will be the presence of Latinx long before the arrival of U.S. settlers and government, the process of becoming U.S. citizens, and what that has meant and currently means. This course will explore over 500 years focusing on key events and themes in the experiences of Latinx communities. The course will also look at Latinx history through seminal legal decisions and the effect they have had on American society. We will use primary and secondary sources as well as oral testimony, reflection, film, and memoir. (½ credit)

Advanced option prerequisites: 90 in prior department coursework, review of analytical reading and writing proficiency, and department approval (offered in summer 2021 only)**

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 Latin America (with Advanced option) Grades 11-12

The course is devoted to the 20th century. We use conflict as a lens to examine the evolving relationship of the United States to Latin America by studying the Cuban Revolution, the Dirty War in Argentina, and the civil wars of Central America. Each student also completes a comprehensive independent research paper. This is a reading- and writing-intensive course that is collaborative in nature with students working together on debates, projects, and leading discussions. (½ credit)

Advanced option prerequisites: 90 in prior department coursework, review of analytical reading and writing proficiency, and department approval (offered in summer 2021 only)**

World History 1300-1800 (with Advanced option)

Grades 11-12

This course covers from approximately 1300 CE through to the late 18th century. It takes a global approach to human history. Broad themes are explored, including the interactions of humans with their environment, the role of disease, the role of religion in conserving culture and propelling change, and the impact of technology. Special attention is given to issues of class division, power distribution, economic activity, and identity formation. Most importantly, the course strives to de-center the Western European model of history embodied in terms such as “the rise of the West.” Discussion and public speaking skills will be stressed. (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

This course picks up the story of human history from the late 18th century and carries it forward to the present. It takes a global approach to human history. Broad themes are explored, including the interactions of humans with their environment, the role of disease, the role of religion in conserving culture and propelling change, and the impact of technology. Special attention is given to issues of class division, power distribution, economic activity, and identity formation. Most importantly, the course strives to de-center the Western European model of history embodied in terms such as “the rise of the West.” Discussion and public speaking skills will be stressed. (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
- 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*	
Math Recommended for all	
Precalculus* or Functions with Math Modeling	
Math Electives	Computer Science Electives
Statistics Calculus 1* Calculus 2 (Advanced) Linear Algebra (Advanced) Multivariable Calculus (Advanced) Math Independent Research (Advanced)	Computer-Aided Design (CAD) Intro to Programming Web Development Dynamic Application Development Computer Science 1 (Advanced) * Computer Science Independent Research (Advanced)

*Advanced Option Available

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 use of computational aspects of basic results. 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 needs 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

This course completes the study of grammar of the language of mathematics. Using a functional approach, this course lays the groundwork for all future high school math study. The emphasis is on the manipulation of polynomial, logarithmic, exponential, rational and radical expressions, solving equations, and inequalities involving these expressions. Anticipating a graphical emphasis of subsequent math courses, students are introduced to the graphs of associated functions. 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

Algebra 2 (Advanced) uses a functional approach, and lays the groundwork for all future high school math study. The emphasis is on the manipulation of polynomial, logarithmic, exponential, rational and radical expressions, solving equations, and inequalities involving these expressions. Anticipating a graphical emphasis of subsequent math courses, students are introduced to the graphs of associated functions. This course covers the same material as Algebra 2 in greater depth and at a faster pace. Successful completion of Algebra 2 (Advanced) prepares students to take Precalculus (Advanced). (1 credit)

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 needs the challenge of a fast-paced course in order to thrive in the classroom. The course covers the same topics as the advanced Algebra 2 and Precalculus courses. 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 (Advanced) 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.*

Computer-Aided Design

Grades 10-12

Computer-Aided Design (CAD) for engineering, art, and architecture supports students learning CAD tools and practices needed in engineering, art, theater, and architecture areas. Students who complete this course use CAD in robotics, theater, architecture, and design work while at Westtown and to prepare for multiple fields of study in college. A substantial final project and presentation is required. (½ credit)

Prerequisites: *Geometry, a 2D Art course, and department permission*

Introduction to Programming: Building with Software

Grades 10-12

This course provides an introduction to computer programming for students with no previous experience. Fundamental concepts of programming are taught using Python. Additional libraries and App Inventor are often included. Emphasis is placed on developing collaborative problem-solving capabilities, leadership, and presentation skills as students work on individual, team, and full-class projects. The ethics of software is addressed. (½ credit)

Prerequisites: a final grade of 75 or higher in Geometry, one full credit of science, and department permission

Website Development

Grades 10-12

This course provides an introduction to designing and developing websites for students with some previous programming experience. Website development is taught on an HTML/CSS/Bootstrap/PHP/MySQL stack using the students' own laptops, physical and virtual servers, and Internet reference tools. 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 applications with distributed components, including a server-hosted database. Such applications work on all mobile devices, including phones, tablets, and laptops. This course is for students with previous coding experience. An appreciation for both strategic work and detailed code development is important throughout this course. Dynamic Application Development is taught using a full HTML/ CSS/ Javascript/ PHP/ MySQL/ SQL 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 as students work on individual, team, and full-class projects. 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. The class will collaboratively work to design and build a complete system to solve a real problem, and work towards effective implementation and adoption. The students learn technical project management skills. Following this class challenge, students will 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. Some projects use Arduino and Raspberry Pi technology. Some students develop machine learning/AI applications. 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. Students will lead technical web and mobile application 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 a perspective that includes a diversity of western and non-western lenses and many courses consider non-religious worldviews. We explore sacred texts and use student-centered discussions and direct experience with followers of religious traditions and primary modes of learning. 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:

- Understanding of Hinduism, Buddhism, Judaism, Christianity, and Islam as core world religions
- Field trips to a local church, synagogue, mosque, and/or Hindu temple
- Reflection, mindfulness, and respectful listening practices
- Interpretation of religious literature in a variety of traditions
- Recognition of the internal diversity of religion and the evolution of religion over time
- Variety of responses to religious exploration: academic research, reflective journal writing, and arts-based projects

Religion Required Courses

Quakerism in Life and Practice
World Religions 1: Christianity and Judaism
World Religions 2: Hinduism, Buddhism, Islam

Electives - Required: one in 11th grade or 12th grade

Environmental Justice*
Religion, Gender, and Sexuality*
Religion, Resistance, and Revolution*

*Advanced Option Available

Students in Advanced electives are held to a higher standard of academic rigor, including the completion of three or additional independent projects by specific deadlines 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

Jews and Christians throughout the world have been committed to reading and interpreting their sacred texts and developing religious traditions based on these texts. This course will explore the textual foundations, ritual traditions, and worldviews of Judaism and Christianity through their evolving historical and cultural contexts. Students will gain an enhanced ability to interpret the role of religion in society and engage with their communities as ethically responsible citizens in a multi-religious world. (½ credit)

World Religions 2: Hinduism, Buddhism, Islam

Grades 11-12

World Religions 2 explores the dominant religions of Asia and the Middle East—Hinduism, Buddhism, and Islam. These traditions not only shape modern societies in powerful ways, but also offer unique and often instructive correctives to Western attitudes. These traditions are studied through primary sacred texts, literature, Harkness discussions, the arts, and field trips. (½ credit)

Prerequisite: World Religions 1. Sophomores who wish to take World Religions 2 in the second semester may request department approval.

Religion, Resistance, and Revolution (with Advanced option)

Grades 11-12

This course examines the intersection between religion and social uprising in the face of injustice, and considers Christianity in particular and religion in general as a vehicle for social and political freedom of the oppressed. It will also explore specific modern contexts where religion and religious leaders inspire and inform nonviolent resistance. This course recognizes and explores the connections between religion, politics, and the pursuit of justice in the modern world. The course calls for self-examination and awareness of social and ethical issues such as first-world privilege, socioeconomic injustice, and race discrimination. (½ credit)

Prerequisite: World Religions 1

Religion, Gender, and Sexuality (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 in eight different categories of religion: Native American religions and Spiritual Traditions, religions of Africa and the African diaspora, Taoism, Hinduism, Buddhism, Judaism, Christianity, and Islam. 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 (with Advanced option)

Grades 11-12

Climate change has deep and considerable implications for human life and for justice in the world. This course starts by examining the ways in which both religious and scientific thought have shaped western worldviews toward the environment, in both harmful and helpful ways. Students then sift through a series of case studies from around the globe which include current issues involving religion, climate justice, and public policy, such as environmental racism. Throughout the course, students will reflect on their own life and experience as well as their attitude and relationship to the natural world. In a few capstone projects, students will analyze and reflect upon their own carbon footprint as well as that of Westtown School. (½ credit)

Prerequisite: World Religions 1 & 2

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 as 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*	
Science Recommended for all	
Physics 2* Chemistry 2*	
Electives	
Biology of Disease Anatomy and Physiology (Advanced) Environmental Science 1 * Environmental Science 2* Environmental Research (Advanced) Digital Electronics and Logic Electricity and Magnetism (Advanced) Modern Physics (Advanced)	Applied Chemistry Chemical Bonding (Advanced) Chemical Reactions (Advanced) Introduction to Mechanical Engineering: Tools and Fabrication Human-Centered Design Design Engineering Design Engineering Solutions 1 (Advanced) Design Engineering Solutions 2 (Advanced) Scientific Research (Advanced)

*Advanced Option Available

Course descriptions:

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

Conceptual 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 and two dimensions, 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)

Placement test required for the Advanced course

Chemistry 1: Atoms to Reactions (with Advanced Option)

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, including acid/base reactions. (½ credit)

The advanced course moves at a faster pace than Chemistry 1, with a greater emphasis on analytical problem solving and interpretation of laboratory data. 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)

Placement test required for the Advanced course

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 covering the cell as the basic unit of life. The structures and functions of cellular organelles will be discussed with emphasis on DNA as the molecule that controls cell function. Additional cellular functions 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. (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) or Physics 1 & Chemistry 1 (90 or above and departmental approval)

Biology 2: Ecology

Grades 10-12

In this course, students move from the microscopic view of DNA and gene mutations to drive evolutionary change, to the origin of life on our planet and the development of the ecosystems on Earth. Students will identify 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 work and laboratory investigation techniques. A key goal of this course is to improve analytical and writing skills through observation, 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, and ecology, 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 designing and executing their own 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 (with Advanced Option)

Grades 11-12

In this course, students will further their study of chemical reactions, with an introduction to moles, stoichiometry, gases, thermochemistry, redox reactions and electrochemistry, 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

The advanced course moves at a faster pace than Chemistry 2, with a greater emphasis on analytical problem solving and interpretation of laboratory data. 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)

Conceptual 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 circular motion, rotational motion, simple harmonic motion, waves, sound, light, and geometric 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. (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

This course focuses on the physiological challenges animals face, including energy balance, thermoregulation, water balance, and sensing and responding to environmental stimuli. Students will examine these challenges and the physiological adaptations needed to meet them in various environments, and will compare the anatomy and physiology of various invertebrate and vertebrate body systems. This course focuses extensively on primary literature, experimental design, data analysis, and scientific writing. The semester culminates with a student-designed experiment and presentation of a formal scientific conference-style poster. (½ credit)

Prerequisites: *Biology 2 (Advanced) and department approval*

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. The course will begin with a study of the immune system, epidemiology, mathematical modeling of infectious disease spread, public health, and preventative health care (e.g., vaccination). In addition to histology, the laboratory portion of this course will employ case studies of infectious disease throughout history, such as the bubonic plague of the Late Middle Ages, the influenza pandemic of 1918, the polio epidemic in the United States in 1952, the emergence of Legionnaires' disease in Philadelphia in 1976, the emergence of the human immunodeficiency virus in the early 1980s, and the Ebola virus outbreak of 2014-2015. Other infectious diseases that may be studied include: anthrax, Hansen's disease (leprosy), Lyme disease, malaria, polio, rabies, smallpox, and tuberculosis. (½ credit)

Prerequisites: *Biology 1 & 2 (May be taken concurrently with Biology 2)*

Chemistry Options:

Applied Chemistry

Grades 10-12

This inquiry-based course seeks to demystify the science of the things that we encounter everyday. We will examine the chemistry of food, analyzing what makes our food taste good and the science behind various cooking techniques. We will also study the chemistry of art by investigating the properties of ceramics and glazes utilizing materials science. We will study the chemistry of water by investigating Westtown Lake and our watershed. Additional topics are by student design and will vary in different sections. Past examples include the investigation of cosmetic chemistry and the saponification process, and various independent projects ranging from addiction and brain chemistry to edible water bottles. (½ credit)

Prerequisite: *Chemistry 2*

Chemical Bonding (Advanced)

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 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 2 (Advanced) and department approval*

Environmental Science Options:

Environmental Science 1 (with Advanced option)

Grades 10-12

In this interdisciplinary, laboratory-based course, students will learn the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world. They will learn to identify and analyze both natural and human-made environmental problems, will evaluate the relative risks associated with these problems, and will examine alternative solutions for resolving and/or preventing them. Some topics of study include environmental policy within the context of social justice, energy extraction and use, coral reefs, and climate change. Additionally, this course makes extensive use of Westtown's 600-acre campus to investigate atmospheric pollution, water quality, and the impact of climate change on trees. Students will hone their technical writing and speaking skills and will practice reading scholarly articles. (½ credit)

Advanced students will complete an independent research project. They will also craft an e-portfolio where they peer-review current scholarly articles related to topics that interest them in environmental science. This course will prepare students to lead scientific investigations in other Westtown courses or in their post-secondary studies. 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 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. (½ credit)

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 2; Advanced requires department approval

Environmental Research (Advanced)

Grades 11-12

In this course, students will dive deep into a topic of their choice. Drawing from knowledge and skills acquired in previous courses, students will choose an environmental problem facing Westtown School, the local region, or their hometown. During the first half of the course, students will research their chosen topic and report their findings in a seminar-style presentation. Once students have developed a working knowledge of their chosen problem, they will research means of solving this problem, design a course of action to solve the problem, and present their results to their peers, the faculty, and invited guests who are stakeholders and decision-makers related to the chosen topics. (½ credit)

Prerequisite: Environmental Science 1 Advanced or 2 Advanced (90 or above and department approval)

Physics Options:

Digital Electronics

Grades 11-12

This hands-on course introduces students to the principles of digital logic and design. Beginning with a study of Boolean logic functions, students will learn how basic logic gates can be created, then combined to design more complex systems including integrated circuits (ICs). Semiconductor theory will be studied as part of the evolution of logic gates from relays, to vacuum tubes, to transistors. As students build elements including flip-flops, multiplexers, counters, adders, and encoders, they will also learn how to use ICs and microcontrollers as part of a larger system. Students should be capable of doing independent work, as they will be applying the principles learned to the construction of their own circuits and projects. (½ credit)

Prerequisites: Physics 1 & 2

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)*

Research and Design Engineering Options:

Scientific Research (Advanced)

Grades 11-12

Students will conduct original research in the life sciences 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. Students are strongly encouraged, though not required, to enroll in Anatomy and Physiology (Advanced) in preparation for this course. (1 credit)

Prerequisites: *Physics 1 & 2, Chemistry 1 & 2, Biology 1 & 2 with grades of 95 or higher (90 or higher if Advanced), in addition to department approval*

Engineering: 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)

Prerequisites: *none*

Design: Human-Centered Design

Grades 9-12

Human-Centered Design works at the intersection of design thinking, human-centred design and entrepreneurship to create solutions addressing social challenges through programs, policy and products. Students will develop an understanding and mastery of design thinking processes, client-centric project development, critical analysis of impacts and consequences, and tools for communication, collaboration, development of funding streams, and presentation to wider audiences. (½ credit)

Prerequisites: *none*

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, budgeting and implementation. Design Engineering creates collaborative cohorts of students with a range of skills sets and experiences (depending on their choice of introductory course) to design and engineer applied products and solutions to address real world challenges or needs. This course may be taken with an “advanced” designation by student election and completion of additional final products. (½ credit)

Prerequisite: Human-Centered Design or Computer-Aided Design or Introduction to Mechanical Engineering

Design Engineering Solutions 1 (Advanced), 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. Students who have successfully completed Design Engineering and Human Centered Design for Change may propose to pursue an advanced project without physical deliverables in Design Engineering Solutions. Project proposal ideas 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: Design Engineering for all students, and Human-Centered Design (for non-fabricated project deliverables) or Introduction to Mechanical Engineering (for fabricated project deliverables), and department permission.

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 event planning. 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 AND CLASSICAL 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 foreign language.

Department Philosophy

The World and Classical Languages Department 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 the Westtown students for an interconnected world in which people of diverse linguistic and cultural backgrounds collaborate together in the workplace of the future. Immersion in additional languages and working toward fluency are essential tools for a global world.

Students who complete four years of language study 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 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, Cuba, Puerto Rico, Greece and Rome, 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
 French 1, 2
 Latin 1, 2
 Spanish 1, 2

Recommended

3rd, 4th (Adv), 5th (Adv) credit of language

Chinese 3, 4, 5
 French 3, 4, 5
 Latin 3, 4, 5
 Spanish 3, 4, 5

Courses Descriptions:

FRENCH

French 2

Grades 9-12

This course is a sequential continuation of French I. 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 and subjunctive moods. This increased knowledge of grammar, combined with a more extensive vocabulary, will strengthen the student's ability to communicate in French. 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 French at a linguistic level, students will examine the geography, history, and arts of the Francophone 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)

French 3

Grades 9-12

This course builds on foundational linguistic and cultural competencies acquired in French 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. Students will learn the remaining tenses of the indicative mood and develop a fundamental understanding of the subjunctive tense. 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)

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. Students who choose to do so will also prepare to take the Subject SAT with Listening French Language exam developed by the College Board. (1 credit)

Students must have achieved level of proficiency, an 85% or above, and/or department approval to be promoted to the next level.

World and Classical Languages

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. Students who choose to do so will also prepare to take the AP French Language exam developed by the College Board. (1 credit)

Students must have achieved level of proficiency, an 85% or above, and/or department approval to be promoted to the next level.

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 writing. After one year of instruction, the 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 simple 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, the students should achieve proficiency level of intermediate low to intermediate mid 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. (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 mid to intermediate high 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, short Chinese movies or television shows or video clips will be integrated into the course curriculum. (1 credit)

World and Classical Languages

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, the 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. 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 or television shows or video clips will be integrated into the course curriculum. (1 credit)

Students must have achieved 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, the 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, Chinese 5 class will provide 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, the students should achieve proficiency levels in the advanced low to advanced mid range as defined by the American Council on the Teaching of Foreign Languages. (1 credit)

Students must have achieved 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 and the preterite to a high degree of proficiency. Students will be introduced to the many and different cultures of Spanish-speaking countries. Listening and speaking exercises, the textbook website, 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 and subjunctive moods. 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 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, and music as cultural texts will be introduced. Students who choose to do so will also prepare to take the Subject SAT with Listening Spanish Language exam developed by the College Board. (1 credit)

Students must have achieved 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. Students who choose to do so will also prepare to take the AP Spanish Language exam developed by the College Board. (1 credit)

Students must have achieved 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 and accent. Although Latin is employed in oral exercises, most of the class is conducted in English. Students study relevant etymological and syntactical connections between Latin and English in an effort not only to increase proficiency in Latin, but also in English. The study of Latin culminates with a student's ability to translate the original works of Latin authors and to analyze them in the appropriate contexts of history, literature, and philosophy.

Latin 1

Grades 9-12

This course aims to give the student the broadest understanding of the ancient Roman 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 archaeology. 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)

World and Classical Languages

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 two trimesters will continue to be *Latin for the New Millennium*. 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 they can begin to explore the language on their own terms. Their focus will now shift from learning through a textbook to the realm of Roman literature in its original form and a close examination of the history and culture surrounding such works. The works that we will focus upon in class are two of the most articulately crafted, intriguing, and beautiful in all of antiquity. The first semester will be spent reading Cicero and Sallust accounts of the Catilinarian Conspiracy. During the second semester we will 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 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 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 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

Language Independent Study (Adv)
Computer Science Independent Study (Adv)
Math Independent Study (Adv)

This course is 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 on a bi-weekly basis. (½ credit)

SENIOR PROJECTS

Grade 12

By the senior year, students are ready to apply their ideas outside the classroom in a working world setting. Senior Projects give students a chance to design an independent experience away from the familiar classroom setting, with the focus on independent inquiry and personal growth. Students design a two- to three-week project which takes them outside the campus for service work, cultural immersion, research educational experience, or an internship. Students may also choose to participate in one of Westtown's global program trips. The Senior Project is not a requirement for graduation at this time, but rather an opportunity for students to have an immersive, deeply personal educational experience.

COLLEGE COUNSELING

Westtown's College Counseling Department works with all students in the next step of their education: researching, applying to, and choosing a college. 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 meet with students in group settings to give mini-lessons in preparing for the college process. They meet with students who have individual questions or concerns, such as those pursuing athletic recruitment or wanting more advice on course selection. 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 more specific 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 or 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 Multicultural 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, and because of the thoughtful, supportive process, they feel secure in their choices.

Distinguishing Programs & Deep Dive Certificate Programs

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:

- Social Entrepreneurship
- Sustainability Leadership
- Diversity, Inclusion, and Social Change
- Global Citizenship
- Data-Driven Change

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. For instance, a student interested in Social Entrepreneurship might participate in the [Ashoka's](#) Catapult Incubator in developing a socially responsible business concept.
- 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; Information Literacy.

GLOBAL CONNECTIONS: LIVING AND LEARNING IN A CONNECTED WORLD

FACULTY-LED TRIPS IN THE UNITED STATES:

[Beyond Civil Rights](#)

This 14-day trip through the American South offers participants a chance to examine the truth of race in America, in both its historical and current complexity. Rooted in history, this trip is not solely a journey into the past, but is designed to illustrate the direct correlation between slavery and social injustices throughout history – from lynching to mass incarceration, police brutality, and biased social policy. With an aim toward truth-telling and self-discovery, this trip is an intentionally challenging, introspection and analysis of the haunting legacy of slavery and its genealogical connections to contemporary racial inequities in America. Throughout the trip we will meet with key civic and social leaders, artists, museum curators and historians involved in the fight for social justice and truth telling. We also will enjoy the warmth of the American South as well as the cuisine, arts, music and architecture that each destination has to offer.

Global Connections & International Experiences

Coral Reef Restoration

Students participating in this trip will earn their PADI open-water dive certification through Blue Horizons Dive Shop (located in Glen Mills, PA) as well as a Coral Restoration certification through the Coral Restoration Foundation in Key Largo, Florida. This is an eight-day trip involving education in the mornings and SCUBA restoration work in the afternoon. When they are not diving, students will visit a turtle rescue hospital and observe wildlife while sea kayaking along the Florida coast. Students must be in their junior or senior years in order to participate in this trip. This trip satisfies Westtown's 40-hour service requirement.

Grand Canyon Wilderness

This trip to Northern Arizona features a seven-day backpacking trek through the Grand Canyon. It is a unique opportunity for students to experience this natural wonder firsthand, to see both the beauty and fragility of this place in a much more intimate way than most tourists. Included will be visits to places important to Native American culture, both past and present. This trip is not just student centered, it will be fully designed by the participating students. This includes the hiking route, the cultural and historical sites visited, and some logistics as well.

PUERTO RICO: Westtown in Puerto Rico

The Westtown in Puerto Rico trip is a unique opportunity for Upper School students to expand their linguistic and cultural horizons while engaging in service-learning. This is a language-immersion trip which welcomes novice through advanced speakers of Spanish. Students have the unique experience of traveling to many different locations in Puerto Rico (San Juan, Fajardo, Piñones, El Yunque, Guavate, Ponce, La Parguera, and Santurce) to experience the island in a much deeper way than the typical tourist. Through their work at a homeless shelter and an orphanage, students form bonds with local people and gain an in-depth understanding of the socio-political issues affecting the island. Through their visits to organic farms and service at a rainforest restoration site, students expand their knowledge and skills related to sustainability practices.

INTERNATIONAL EXPERIENCES

CHINA: From Ancient to Modern

This 14-day fascinating, educational, fun, once-in-a-lifetime cultural immersion trip is open to any Upper School students who are interested in experiencing mainland China and Hong Kong first hand. As one of the world's oldest civilizations, China has so much to offer to its visitors, such as its rich history, fascinating world heritage sites, enchanting culture, modern technologies, amazing food, friendly people, and more. Students will learn about the pampered life of emperors and the everyday life of schoolchildren. They will step into history at the breathtaking Forbidden City, while climbing the Great Wall, and as they visit the Terracotta Warriors. Students will tour exotic natural formations like the Reed Flute Cave, and visit one of China's national treasures, Giant Pandas, and they will fly into the future on the Shanghai Bund, where modernity melds seamlessly with tradition. In addition, students will enjoy Hutong Tour in a rickshaw, Taiji lesson in the Summer Palace, bamboo rafting on the Li River, a traditional tea ceremony, an acrobatic show, and Huangpu River Cruise. Experience China: culturally fascinating, politically relevant, and home to a sixth of the world's population.

CUBA: Westtown En Cuba

The Westtown en Cuba Program is an experiential and globally-minded program. It is a People-To-People cultural and linguistic immersion experience giving students the opportunity to interact with specialized public schools in Havana, Matanzas, and Cienfuegos. Students also engage in service with the Proyecto Comunitario Muraleando in Havana, a program similar to the Philadelphia Mural Arts Program. They visit and partner with organic farms in Matanzas and The MLK Center for Peace, as well as visiting some of Cuba's most pristine nature reserves. This program is dedicated to peace building and understanding among communities in Cuba and Westtown.

International Experiences

GHANA: Heritage Academy, Breman Essiam, Ghana

In 2004, former Westtown faculty member Kwesi Koomson founded Heritage Academy, a school for children in his hometown of Breman Essiam, Ghana. Since 2008, Heritage Academy –now one of our sister schools– has hosted Westtown students, giving them an opportunity to teach and work in partnership with Heritage Academy, and to complete a service project that the school requests. This two-week immersive trip gives students an authentic opportunity to experience Ghanaian culture. Students will learn about the history of transatlantic trade of the enslaved and visit former trading posts along Cape Coast; orientation will include readings and exploration of this history. Students will explore the bustling marketplaces of Mankessim, Essiam, and Ajumako, and will experience the wonders of Kakum National Park and its canopy bridges. (This trip fulfills the 40-hour service requirement.)

GREECE: Westtown in Greece

Westtown in Greece offers students the opportunity to visit the foundations of Western civilization. Our itinerary includes explorations of Athens, Corinth, Nafplio, the theater of Epidauros, Olympia, and Delphi. This trip is designed to complement students enrolled in Latin, but it is open to anyone interested in history, art, architecture, philosophy, and archaeology. Latin students will have opportunities to engage with original texts relevant to the sites we visit. Modern Greek language, politics, food, and culture will also be an important part of our experience. This trip is run in partnership with the Paideia Institute, an organization dedicated to promoting the study and appreciation of classical languages and cultures.

ISRAEL/PALESTINE: Jerusalem, Israel and Ramallah, West Bank

The Israel/Palestine trip offers a once-in-a-lifetime opportunity to travel to one of the most influential regions in world history and current affairs, as well as to Jerusalem, the city with sites that are sacred to Judaism, Christianity, and Islam. Participants will hear multiple voices of Palestinians and Israelis, develop relationships with local students, and visit with human rights groups, social justice organizations, businesspeople, educators, and community activists. The group will visit Jerusalem, the Jezreel Valley, Nazareth, the Sea of Galilee, the Jordan Valley, Jaffa, Bethlehem, and Ramallah. This experience includes homestays with families whose children attend Ramallah Friends School, Westtown's sister school in Palestine.

ITALY: Paideia Institute visits Rome and Naples

This trip is designed for Latin students, but it is also open to any Upper School students who are interested in making a more profound and first-hand connection with modern and ancient Italy. Westtown runs this trip in partnership with the Paideia Institute, an organization that aims to provide rigorous and intensive periods of study of Latin and to inspire participants to form a close personal relationship with the classics through extraordinary learning experiences. In addition to visiting sites in and around the cities of Rome and Naples, students also engage with the Latin language in both written and spoken activities.

Understanding the Holocaust

Covering four countries as well as numerous cities and sights of the Holocaust, this program will provide a foundation for understanding the Holocaust, both broadly and locally. Throughout our time, we will investigate and explore one of the greatest atrocities western civilization both permitted and endured. Complex and complicated, the Holocaust was not a natural disaster, nor can history be predetermined. To be sure, the Holocaust was not inevitable. People – individual people and people acting within the context of organizations, community, and institutions – took decisions that, step by step, brought European society to genocidal mass murder. Others resisted. Most, however, stood by and chose to do nothing while victims were consumed by the machinery of death. Looking at a range of people (individual and collective), ideologies, places, memoirs, documents, primary and secondary sources as well as voices and views on various social levels, we will examine the choices victims, bystanders, and perpetrators confronted and the (in-)actions they took.

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 international student coordinators
- Welcome and orientation of 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, and Host Family picnic
- English language assessment and course placement recommendations for new international students; individual English Language Learning support provided by our Learning Center and English Language Learning team
- 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

ATHLETICS

Whether you're a varsity-level player, someone who simply thrives on competition, or a newcomer to competitive sports, we have a place for you. Every student benefits from our strong, wide-ranging athletic program which includes 21 varsity teams and a plethora of non-competitive options. Respect for coaches, teammates, and opponents is essential as Westtown athletes aspire to achieve individual and team goals. Winning and losing are intrinsic to athletics, and provide opportunities for growth and improvement. You'll learn to perfect your skills, keep your body in great condition, be a good sport, and boost your team. As you take positive risks and reach toward our high standards, you'll gain the discipline and self-confidence that carries you through league games, championships, and on into college athletics.

PERFORMING ARTS

Westtown co-curricular arts programs emphasize a collaborative, creative, and process-oriented approach to theater and dance as we train a new generation of artists, leaders, and changemakers. Our students develop invaluable abilities such as handling responsibility, problem-solving, organizing, motivating themselves and others, developing effective interpersonal communication, and gaining confidence. We aim to provide a safe environment to take risks, to learn by doing, to fail and try again, and ultimately to succeed and grow as our students develop skills that apply to both their individual art forms and to every aspect of their lives. A strong emphasis on collaboration is central to the program. We offer three seasons of theater performance, dance performance, and scenic arts design.

EXPERIENTIAL ACTIVITIES

Learning is not limited to the classroom. For that reason, each afternoon students engage in a wide variety of co-curricular activities, including a number of experiential learning options. Ninth and tenth grade students can select experiential learning for one of their three seasons. Eleventh and twelfth grade students can select two seasons of experiential learning. Choices range from training as a leader on our ropes course (Outdoor Leadership Advanced), to immersing yourself in the diversity of natural environments on our 600-acre campus in Outdoor Leadership, to robotics, organic gardening, and Service Network. In each of these experiences, students rise to the challenge of new experiences along with a variety of settings that develop skills in collaboration and the joy of working together to make a difference in the environment or community.

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 become more aware of their own strengths as learners and to develop the tools to drive their own academic success. The Learning Center is open to all students in the Upper School, 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. Our Learning Specialists also oversee a team of peer tutors who provide one-on-one help in a variety of subjects.

The Learning Center Specialists also work closely with the school's educational psychologist and 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. 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. 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.

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 and Math Club 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, Senior Project, and service proposals. In addition, the Writing Center provides a resource to encourage the art and craft of writing.

AP EXAM INFORMATION

2021-2022

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 seek approval from the Dean of Academics and Director of College Counseling. 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)
Biology	Bio 1 (Adv) and Bio 2 (Adv), Anatomy & Physiology (Adv), Evolution (Adv), and possible additional study.
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 with teacher.
Chinese Language and Culture	Chinese 4 or 5
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), Environmental Research (Adv), and additional study.
French Language and Culture	French 4 and 5
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
Spanish Literature and Culture	Spanish 5
Statistics	Statistics and additional study
Studio Art Drawing	Full year of art classes as a sophomore or junior and current enrollment in Studio Art Advanced
Studio Art 2-D Design	Full year of art classes as a sophomore or junior and current enrollment in Studio Art Advanced
Studio Art 3-D Design	Full year of art classes as a sophomore or junior and current enrollment in Studio Art Advanced
U.S. History	U.S. History and likely additional study

NOTES

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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

