

WESTTOWN SCHOOL

**UPPER
SCHOOL
CURRICULUM
GUIDE**

2020-2021



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WESTTOWN SCHOOL

Upper School Curriculum 2020-2021

OVERVIEW

The Westtown Upper School curriculum challenges students to discover their intellectual passions and to develop the skills needed to become stewards and leaders of a better world. The curriculum evolves from ninth to twelfth grade, stretching beyond core skills in communication, project planning, and problem-solving to elective options rich in opportunities for leadership in designing research and social action projects, applied laboratory experiences, and sustained depth of study through the Deep Dive Certificate Program.

What will you find in our academic program?

Courses which encourage you to stretch yourself

- You'll think critically and create new ways to approach challenging ideas and problems
- You'll create an action plan to address an issue of social justice in religion classes
- You'll analyze data in economics class that connects results with sustainability solutions
- You'll master clear and compelling writing skills in a program that values communication and analytical skills as essential tools for success

Diploma requirements which offer both the flexibility to highlight areas of strength and a solid foundation

- You can tailor a curriculum to develop your passions and your talents
- Advanced offerings for in-depth study of subjects that appeal to you
- Opportunities to design independent research and projects in your courses
- Deep Dive Certificate Program that promotes student-created projects with a changemaker focus

A classroom approach which reinforces connections, collaboration, community building, and social responsibility

- Dialogue, debate, persuasion, discovery are at the heart of the dynamic classroom experience
- Arts and science programs focus on collaboration
- Group projects and presentations put student inquiry at the center
- International immersion programs and service-learning projects unique to Westtown challenge you to make global connections across cultures

Building a Program to Highlight your Strengths and Passion

Every department offers challenging courses that encourage intellectual inquisitiveness, critical thinking, creative problem-solving, cultural awareness, moral sensitivity, and personal integrity – all hallmarks of our program. In addition to the core courses, each department offers opportunities for advanced study so that students can pursue their intellectual passion with enhanced rigor and depth. The list below highlights some of the options students have chosen to pursue.

Interested in Science, Technology, Engineering, Arts, and Math (STEAM)?

- Analyze DNA patterns in Scientific Research (Adv)
- Build a program that includes Calculus 1, Calculus 2, Linear Algebra, Computer Science
- Add Design Engineering and Computer-Aided Design
- Lead the robotics team
- Create an app that students and faculty will use to manage Westtown's weekend residential program

Interested in International Relations, Cross-cultural Communication, Peace Studies, Social Justice?

- Build a program that includes language immersion in Spanish and Chinese every year
- Create a plan for Middle East peace in Hiroshima to 9/11
- Invent a business plan in Business and the Good Society
- Add to the mix a strong foundation in World Religions, Economics, and a student leadership position

Interested in Ecology and Sustainability?

- Build a program that includes hands-on field research in Scientific Research (Adv)
- Join the Deep Dive Certificate Program in Sustainability Leadership
- Analyze the limits of the Earth's resources in Microeconomics
- Design a film project for Environmental Justice highlighting urban blight and proposing solutions

Interested in Writing, Literature, and Communication?

- Create a portfolio of writings that present a strong and unique voice as developed over your four-year program of writing-intensive projects in English, history, religion, Spanish
- Develop compelling arguments in Model UN or create a proposal for a policy change on campus

Interested in the Art, Music, Theater?

- Develop a portfolio in Advanced Studio Art
- Perform in district and regional music festivals
- Play the lead in two seasons of stage productions
- Write a script or compose a piece of music in Advanced Performing Arts Tutorial

Graduation Requirements:

Westtown's graduation requirements are purposefully flexible so that a student may concentrate in areas of passionate interest, as in the case of students who take five science classes during their four years in Upper School. In fact, most Westtown students will take at least three years of classes in each core academic area in grades 9 through 12.

Section:	Recommended:	Minimum Requirement:
Arts	1.5 credits	1.5 credits
English	4 credits	4 credits
Health	.5 credits (<i>Health and Life Skills</i>)	.5 credits
History	3 credits including US History (<i>at least 1 credit in grades 11 or 12</i>)	2 credits
Math	4 credits (<i>through 12th grade</i>)	3 credits in grades 9-12
Religion	1.75 credits	1.75 credits
Science	3 credits	2 credits
World Languages	3 years in one language in grades 9-12	2 credits in grades 9-12
Co-curricular activities	Every Term: 4 years	Every Term: 4 years
Community Life Boarding Program	2 years in residence 11 th and 12 th grades (<i>For students enrolled by grade 7, boarding is optional</i>)	11 th and 12 th grade
Experiential Learning & Service	Deep Dive Certificate Program, Senior Projects, Service	Service - 40 hours

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. Students in 10th, 11th, and 12th grades who join this program create a focused, in-depth exploration of an area of interest across a number of subjects. Each certificate challenges students to connect ideas with action, and to explore learning on campus as well as in the world beyond our walls through community service and immersion experiences. The student creates the path from initial interest to successful capstone project.

The program honors students who are engaged in an intentional, organized, and well-documented program of action-based learning and focused scholarship. Upon completion of the program, students will receive a designation on their transcript.

Westtown offers Deep Dive Certificates in five areas:

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

Each Certificate has a set of academic requirements that may be met as students fulfill course requirements for graduation:

- Students must complete four projects over their junior and senior years 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 their 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 40 hours of service. They may also choose another means of immersion. For instance, a student interested in Social Entrepreneurship might participate in Ashoka’s Catapult Incubator.
- 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 in a reflective whole, and demonstrates Westtown’s Global Competencies:
 - Leadership and Collaboration
 - Ethical and Cultural Sensibility
 - Scientific and Analytical Literacy
 - Communication
 - Creativity
 - Information Literacy

COURSE OFFERINGS BY DEPARTMENT

ARTS

Department Philosophy

The Visual and Performing Arts Department believes 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. 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 can take classes in 2D and 3D visual arts, music, and theater with robust co-curricular offerings in music, theater, and dance rounding out the curriculum.

Students are required to complete one and a half credits in the arts.

Distinguishing Features:

- **Core faculty who are professionals in their fields**
- **Unique focus on encouraging a student’s voice centered on collaboration and creative process.**
- **Frequent performance and exhibition opportunities**, both on and off campus, including regional competitions
- **World-class artists perform, exhibit, and teach on campus**
- **Facilities** that include a 560-seat fully-equipped theater/performing space, a process-oriented art gallery, studio space, recently renovated classroom and rehearsal spaces, state-of-the-art individual practice rooms, digital media lab, ceramics studio, and woodshop
- **Portfolio development**
- **Close proximity to theaters, concert halls, art museums** and galleries in Philadelphia, New York, Baltimore, and Washington, DC; visits to these complement classroom instruction
- **Strong college placement record**

Music:	Theater:	Visual Art:
<p>Full-year (half credit): Choral Arts 1,2,3,4 (Adv) Symphonic Band 1,2,3,4 (Adv) String Orchestra 1,2,3,4 (Adv) Jazz Ensemble 1,2,3 Performing Arts (Adv)</p> <p>Semester: Digital Music & Production 1,2 Intro to Guitar</p>	<p>Semester: Elements of Theater 1 Elements of Theater 2 Acting Workshop Theater Arts (Adv) Performing Arts (Adv)</p>	<p>Full-year: Studio Art (Adv)</p> <p>Semester: Introduction to Studio Art 2D Introduction to Studio Art 3D Drawing & Painting 1,2 Photography & Digital Art 1,2 Sculpture 1,2 Ceramics 1,2,3 Woodworking 1,2,3</p>

Theater

832-837 Elements of Theater 1-2

½ credit

grades 9-12

This foundational course provides students with an introduction to theater arts. 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 and collaborator. This course is a prerequisite for all courses and does not require students to perform.

Elements of Theater 2 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. The role of the playwright will be introduced in this course.

Prerequisite for Elements of Theater 2: Elements of Theater or permission of department

833 Acting Workshop**½ credit****grades 10-12**

In Acting Workshop, 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 Constantin Stanislavski, Uta Hagen, Jacques Lecoq, and Sanford Meisner, among others. Students are evaluated on degree of effort, quality of preparation for scene studies, commitment to the ensemble, willingness to engage in peer-to-peer critique, and ability to implement feedback. **Prerequisite: Elements of Theater or permission of department**

834 Advanced Theater Arts**½ credit****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 semester, the students will collaborate on the creation of a new theater performance. Previous topics have included Theater and Social Change and Musical Theater. **Prerequisite: Elements of Theater 2, Acting Workshop, or permission of department**

898 Performing Arts Advanced Tutorial**½ credit****grade 12**

A tutorial-style course open to advanced theater and music students in their senior year. The tutorial will be crafted to the needs of the upper level student but may cover a variety of areas and subjects including: music theory, music and theater history, theater criticism, auditioning technique, and acting styles. Intended for students interested in continuing their study in college or an advanced performing artist looking to round out their arts education. **Prerequisite: Must be taken along with an advanced theater class or ensemble based class; Permission of the department**

MUSIC**800-803 Symphonic Band 1, 2, 3, 4 (Advanced)****½ credit****grades 9-12**

Students enrolled in Symphonic Band learn to perform literature in a variety of styles and time periods. Through the repertoire, instrumentalists develop their musical and technical proficiency on their instrument as well as learn how to be an effective and contributing member of the ensemble. Symphonic Band performances include regularly scheduled concerts as well as additional off-campus concerts in the spring. At the beginning of the school year, auditions are held for placement, not for acceptance into the ensemble. **Prerequisite: At least three years of previous lessons or ensemble experience on a woodwind, brass, or percussion instrument or permission from the instructor**

804-807 Jazz Ensemble 1, 2, 3, 4 (Advanced)**½ credit****grades 10-12**

Instrumental jazz students 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. Students also have learning experiences in the art of improvising, a core element of the jazz idiom. Jazz ensemble performances include regularly scheduled concerts as well as a number of special events on and off campus. **Prerequisite: One year of Upper School large ensemble experience for wind and brass players. Interested guitar, piano, bass, or drum students need to obtain permission from the instructor. Auditions are required.**

809-813 String Orchestra 1, 2, 3, 4 (Advanced)**½ credit****grades 9-12**

Students enrolled in String Orchestra learn to perform literature in a variety of styles and time periods. Through the repertoire, instrumentalists develop their musical and technical proficiency on their instrument as well as learn how to be an effective and contributing member of the ensemble. String Orchestra performances include regularly scheduled concerts as well as additional off-campus concerts in the spring. At the beginning of the school year, auditions are held for placement, not for acceptance into the ensemble. **Prerequisite: At least three years of previous experience on a string instrument or permission from the instructor**

814-815 Choral Arts 1, 2, 3, 4 (Advanced)**½ credit****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.

831 Introduction to Guitar**½ credit****grades 9-12**

This course serves as an introduction to guitar. Students will learn how to care for the instrument, how to read music, tabs, chords, learn basic music theory, and will even be able to collaboratively and individually compose music. By the end of the course, students will have a working knowledge of the guitar and be able to impress friends and family with their skills. ***This course is for beginners only.***

838 Digital Music and Studio Production**½ credit****grades 9-12**

Digital Music and Studio Production exposes students to the basics of audio recording, editing, mixing, and composition through the use of music software. This course focuses 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.

820-824 Applied Music 1, 2, 3, 4 (Advanced)**½ credit****grades 9-12**

Westtown School keeps a roster of professional music instructors to teach on campus students during daytime or evening study halls. All of the teachers 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, including classical, jazz, rock, folk, musical theater, bluegrass, country, and world music. At present, our private music instructors teach voice (singing), piano, guitar, violin, viola, cello, bass (acoustic and electric), trumpet, trombone, baritone horn, tuba, clarinet, flute, saxophone, recorder, percussion, and drum set.

Students may take lessons for credit, but will not be able to apply this to their arts requirement.

To receive credit, students must complete 30 lessons per year.

Requires a fee paid to the private teacher

898 Performing Arts Advanced Tutorial**½ credit****grade 12**

A tutorial-style course open to advanced theater and music students in their senior year. The tutorial will be crafted to the needs of the upper-level student but may cover a variety of areas and subjects including: music theory, music and theater history, theater criticism, audition technique, and acting styles. Intended for students interested in continuing their study in college or an advanced performing artist looking to round out their arts education. ***Prerequisite: Must be taken along with an advanced theater class or an ensemble-based class. Permission of the department is required.***

VISUAL ART**840 Introduction to Studio Art: 2D****½ credit****grades 9-12**

This foundational course provides students with an introduction to two-dimensional media including drawing and digital media. 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 composition, digital camera operations, and the basics of Photoshop.

843 Introduction to Studio Art: 3D**½ credit****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 objects that have form and 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.

867-868 Drawing & Painting 1, 2**½ credit****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.

Prerequisite for Drawing & Painting: Introduction to Studio Art: 2D

Prerequisite to Drawing & Painting 2: Drawing & Painting 1

867-868 Photography & Digital Art 1, 2**½ credit****grades 10-12**

This one-semester course allows students to refine image-making skills through sustained work in the digital lab. Students will continue their study of composition, light, and digital camera operation, while also introducing more experimental manipulation through Photoshop and Illustrator. This type of hybrid workflow allows students many options: scanning for digital editing, printing on transparencies, contact printing, and drawing or painting over digital prints. Students will study the history of photography and consider the aesthetic and social concerns inherent in the medium. Students will produce a range of work that will further develop the breadth of their growing portfolios. Projects will alternate annually.

Prerequisite for Photography & Digital Art 1: Introduction to Studio Art: 2D

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

845-846 Sculpture 1, 2**½ credit****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 clay, plaster, and wood, 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. **Prerequisite for Sculpture: Introduction to Studio Art 3D or by department approval**

873-874-876 Ceramics 1, 2, 3**½ credit****grades 10-12**

The introductory courses (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. **Prerequisite for Ceramics 1: Introduction to Studio Art: 3D or by department approval**

870-872 Woodworking 1, 2, 3 (Advanced)**½ credit****grades 10-12**

Woodworking introduces the nature and properties of wood, joinery, and finishing. 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.

Prerequisite for Woodworking 1: Intro to Studio Art 3D or by department approval

899 Advanced Studio Art**1 credit****grade 12**

Advanced Studio Art is a capstone course for the visual art student. This summative experience brings together students from all visual arts disciplines – drawing and painting, photography and digital art, clay 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 develop a broad range of works. 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. **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/Spring Theater: In the fall and spring, students can participate as actors, stage managers, and assistant directors in the creation of a fully realized production, working with diverse source material including contemporary texts, Shakespeare, and ancient and early modern texts. In the spring, a professional guest director is brought in to expose students to various theater styles. Recent productions include *A Midsummer Night's Dream*, Charles Mee's *Big Love*, Tectonic Theater Project's *Laramie Project*, Qui Nguyen's *She Kills Monsters*, and Naomi Iizuka's *Anon(ymous)* as well as original work and devised productions. The rehearsal process focuses on the value of collaboration, ensemble building, personal challenge, and problem solving.

Winter Musical: In the winter season, students can participate as actors, dancers, pit musicians, stage managers, and assistant directors in a fully realized musical production. Recent productions include *Rent*, *Pippin*, *Fiddler on the Roof*, *Into the Woods*, *21 Chump Street*, and *20th Annual Putnam County Spelling Bee*. The rehearsal process focuses on the important role of problem-solving and personal challenge. There is an emphasis on collaboration as we bring the varied areas of performing arts together to create a new and unique product.

Fall/Winter/Spring Dance: Each season, students 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. 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 Fall Arts Festival
- The Meeting House Spring Concert (Orchestra, Chorus)
- The Spring Band Concert (Symphonic Band, Jazz Band)
- The Solo Recital Series

In addition, the department supports a variety of performances on and off campus, including the annual Neighborhood Hospice Memorial Service and performances at Meeting for Worship, Community Dinner, and Collection. Each year, students audition for the PMEA district and state ensembles.

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

ENGLISH

Students are required to complete four credits of English.

The English Department believes that the study of literature and composition fosters empathy. The core 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. Through a rigorous reading and writing curriculum, students become strong critical thinkers and persuasive communicators.

A student who attends Westtown for four years will complete the following essential experiences:

- 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
- Vocabulary development: Membean software, individualized curriculum in grades 9-10
- 11th grade Personal Narrative paper: students create and present a personal narrative as a capstone experience
- 12th grade Extended Literary Analysis paper: eight to ten-page analysis of a major work of literature that includes research of literary critical perspectives

Required Courses	Electives-Required Semester 2: One in 11 th and one in 12 th grade
<p>Full Year: Perspectives in Literature American Literature</p> <p>Semester 1: Contemporary World Literature The Essay</p>	<p>Semester 2: American Literature 2 (Advanced) Creative Writing (Advanced) 20th Century Dramatic Literature 2 (Writing About Film) Nonfiction 2 (Black Identity & Society) World Mythology</p>

(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:**211 Perspectives in Literature (English 9)****1 credit****grade 9**

Perspectives in Literature 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.

221 American Literature (English 10)**1 credit****grade 10**

American Literature fosters continued growth for students as readers, writers, speakers, and thinkers. Writing exercises of various lengths deepen the development of self-expression and the understanding of the composition process. Students refine their facility with the language through a study of vocabulary, grammar and usage, together with practical applications of editing skills. In addition, they work at developing increased complexity of literary analysis, the capacity to specify and generalize, and the power to participate actively in examining literature in class discussion and in their writing. Teachers use outside sources such as film versions of the literature, posters from the National Endowment for the Humanities Picturing America collections, and visits to local theater.

231 Contemporary World Literature (English 11)**½ credit****grade 11**

Contemporary World Literature offers readings and films from diverse perspectives outside the American worldview. Course literature engages with identity formation and changing cultures. What are their reference points for the past, present, future? for authority? for legacy? for community? for faith? Who are they and where do they belong? Discussions and writing build students' understanding, empathy, and sense of global community and responsibility.

Intensive writing instruction focuses on close literary analysis, rhetorical models, and the composition of the short essay. Building from seminar-style discussions, each student learns to generate and shape a thesis and develop an argument using supporting evidence from the text. Creating outlines, drafting, and working with peer and teacher feedback, students learn the importance of process as well as product. Each student writes and presents a personal narrative as a capstone experience of the course.

241 The Essay (English 12)**½ credit****grade 12**

The Essay 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 a study of essays by classic and contemporary authors and then practice writing using a variety of models and approaches to broaden their communication styles and abilities, and focus on the college essay. Students then study from a selection of core texts to sharpen their critical and analytical skills, and their work culminates in a 8-10 page thesis-based research paper on this text. This assignment requires students to think critically about the play and to situate themselves in a larger, ongoing, scholarly conversation. 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 write an annotated bibliography for their essays.

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. 9th 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.

254 Nonfiction Writing 2: Black Identity & Society**½ credit****grades 11-12**

This course examines the black experience in America, from the Civil Rights movement to today, exploring issues of race/culture, identity, and social justice through a discussion of black literature and sociology. This non-fiction course uses biographies, first-person narratives, essays, contemporary studies/research, and current events/movies/music as "texts" to enrich study and spark dialogue. Taught in collaboration with Marissa Colston and the Office of Diversity and Inclusion, this course encourages students to move past assumptions, stereotypes, and rhetoric to bravely engage in consideration of the multidimensional experiences of blacks in America. **Enrollment for this course will be limited and may result in large group, seminar-style instruction. Priority enrollment will be given to seniors and students enrolled in the Diversity, Inclusion & Social Justice Deep Dive Certificate program. All other requests for this course require department chair approval.**

260 20th Century Dramatic Literature 2: Growing up in Film**½ credit****grades 11-12**

In this course, students will consider coming-of-age stories in film. These films feature characters who are asking questions like: *Who am I? Where do I fit? How and where can I be myself, find a voice, speak?* In thinking about how film tells a story, we will consider the formal elements of filmmaking and film criticism, with attention to the questions: *How is a self defined in relationship to family, economy, and society? What is appealing and universal about these films? How do the stories both overlap and distinguish themselves across time, gender, and family structure?* Films for the course may include: *Stand by Me, Captain Fantastic, Boyhood, Lady Bird, Little Miss Sunshine, The Squid and The Whale, Y Tu Mama Tambien, Lion, Sing Street, The Way Way Back, An Education, Frances Ha, Juno, Good Will Hunting, Garden State, and City of God*, among others.

266 World Mythology**½ credit****grades 11-12**

Myths are used to explain a culture's beliefs about themselves and the greater world. They are rooted in history and tradition and they serve the important functions of both preserving and transmitting culture through stories. This course will focus on myths as literature and study the similarities and differences in ways of seeing and understanding the world across time and culture. Ancient and contemporary myths, folk tales, folklore, fairy tales, and urban legends are all potential topics for this course which looks at the power of storytelling to define and represent a group of people, what they believe, and what they value most. Students will read extensively for this course, and writing assignments will be both expository and creative.

259 American Literature 2 (Advanced)**½ credit****grades 11-12**

This advanced course offers students a chance to further explore their interest in American Literature through study of a collection of works based on a specific topic. Possible topics of study for this class include but are not limited to New York Stories, Road Narratives, Southern Literature, The Harlem Renaissance, Western Literature, African-American Literature, and Indigenous Literature. Reading for the course will include core texts, individual assignments, and parallel reading supplements to enhance students' understanding of American Literature and the topic of concentration. This student-driven, discussion-based course includes regular expository and creative writing assignments, and ends with a semester culminating project to demonstrate an understanding of the semester's area of study. **Prerequisite: 90% average in the previous year's English courses and departmental approval. Qualifying seniors will be given priority for enrollment in this course.**

281 Creative Writing (Advanced)**½ credit****grades 11-12**

This course, for talented, creative writers, offers feedback, practice, and many kinds of writing and reading, including personal narratives, fiction, and poetry. Students practice the skills of powerful creative writing, write extensively in journals, and study craft using models of masters of the short story and poetry. The course is conducted as a workshop where students edit and critique not only their work, but also the work of their classmates. Each student will produce a number of major works over the course of the semester which will highlight their efforts and serve as a culminating assessment.

****This advanced course is open to juniors and seniors with strong performance in English who enjoy writing and want to experience and receive feedback on diverse kinds of writing. Given the writing load and intensity of this seminar, a 90% average in the previous year's English work and departmental permission is a prerequisite for Creative Writing (Advanced). Qualifying seniors will be given priority for enrollment in this course.**

ENGLISH LANGUAGE COURSES FOR INTERNATIONAL STUDENTS

All international students at Westtown take our core English courses (Perspectives in Literature, American Literature, etc.). Based on a variety of in-house and external measures, some international students are also placed into an additional course with a specific focus on English language and composition.

The intermediate- and advanced-level courses offered non-native speakers of English have the following goals:

- to support students with high-intermediate or advanced proficiency in English so that they become comfortably bilingual in all skills before graduating from Westtown
- to provide a rich immersion in reading English, the skill our international students identify as being the most difficult of the four basic language skills (speaking, listening, writing, and reading)
- to provide ample opportunities for the development of oral skills, with a deliberate focus on active small- and large-group discussions and presentations

Course Descriptions:

270 English Language and Composition for International Students 1 1 credit grades 9,10,11

This intermediate-level course is designed for International students to develop fluency, accuracy, and increased sophistication in all English language skills. Students are required to read independently and extensively and write regularly in individual reading journals as they develop English vocabulary, reading speed, comprehension, and writing fluency. Students also participate in literature circles – small, student-led discussion groups requiring each student’s written and oral participation. This course replaces a foreign language course in the student’s curriculum. Students enrolled in this course also take Perspectives in Literature.

271 English Language and Composition for International Students 2 1 credit grades 10, 11, 12

This advanced-level course continues the development of fluency, accuracy, and increased sophistication in all English language skills. Short stories, lectures, essays, poetry, and interviews from classroom texts are often linked with online sources (National Public Radio, TED talks, etc.) as students hone their listening skills while focusing on discussion-rich content. Students also regularly read newspaper articles of their choice and write responses in a current events journal as part of an ongoing focus on academic reading and writing. This course usually replaces a language or history course in the student’s curriculum. Students in this course also take Perspectives in Literature.

272 English Literature & Language (Advanced) ½ credit grades 10, 11, 12

This course supports students whose first language is not English as they work to master English in order to prepare for fluency in university-level courses. The focus is on reading, writing, listening, and speaking so that students build confidence in their ability to use context to understand vocabulary and nuance. The texts include essays and short stories as well as a graphic novel and a play.

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.

Distinguishing Features:

- Class discussions honor differing points of view
- Topics explored within the context of family philosophy, culture, and spiritual beliefs
- Skill development and support for practicing healthy behaviors
- Instruction in decision-making and a variety of practical life skills

Semester 1 or 2: Health and Life Skills	Semester 2: Junior Seminar Elective (Semester 2): Ethical Communication	Full Year: Senior Seminar Elective (Semester 2): Ethical Communication
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Course Descriptions:**950 Health and Life Skills****½ credit****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.

953 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.

954 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.

955 Ethical Communication**½ credit****grades 11-12**

Questions of right and wrong can arise whenever people communicate, whether one-on-one or as a business to a consumer. Ethical communication is fundamental to responsible behavior, decision-making, and the development of relationships and communities within and across contexts, cultures, genders, and media. Throughout this course we will look at: how humans receive information, advertising, and marketing messages; the science behind what motivates people to take action; and, the social and ethical responsibility that accompanies the power that influence wields. We will build a working knowledge of marketing concepts, as well as each student's ability to think creatively and critically about the strategies and tactics involved in growing, leveraging, and sustaining inspired, ethical brands.

HISTORY

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

The History Department 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 activism.

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
- **Peace and Justice Social Action Project** in grades 9 or 10 blends research and action
- **Research project and presentations** required in grades 11 and 12

Core Courses	Electives 2020-21
Full Year: Peace & Justice US History US History (Adv)	Semester: From Hiroshima to 9-11 (Part I)* From Hiroshima to 9-11 (Part II)* Modern Asia* Asian-American Experience* Modern Africa* African-African Experience* Microeconomics Macroeconomics Electives 2019-2020: Modern Latin America* Latin-American Experience* World History* Contemporary Affairs* Holocaust and Genocide*

Key: * Designates courses with Advanced option.

Course Descriptions:

312 Peace & Justice

1 credit

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 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 project that engages them in creating meaningful change (at the local, state, national, or international level) on a topic they choose. Field trips and guest speakers provide inspiration from leaders in the world of civic engagement. Emphasis is also placed on the development of effective study skills: library research, note-taking, outlining, and essay writing.

(Required for all 9th grade and new 10th grade students)

320-322 U.S. History, U.S. History (Advanced)

1 credit

grades 10-12

U.S. History This course is a survey of United States History, beginning with the colonial period and moving forward chronologically to the present day. 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. In the classroom, teachers use a variety of teaching methods with an emphasis on the discussion of both past and present issues and events shaping U.S. History. **(Required for diploma)**

U.S. History (Advanced) In this course, there is an Advanced Placement level textbook and added emphasis on mastery of content, both verbally and in writing. Traditional tests and quizzes are common modes of assessing students' acquired knowledge. Also assigned are a variety of objective and analytical writing assignments. Library research and presentations help students become teachers and educators of their peers. U.S. History is a graduation requirement. **Prerequisite for U.S. History (Advanced): 90 average in Peace and Justice, review of analytical reading and writing proficiency, and departmental approval**

370-371 From Hiroshima to 9/11 History - Part 1 (with Advanced option)**½ credit****grades 11-12**

This course examines the global policies, people, and events that have shaped international relations from the use of the first nuclear weapons to the causes of 9/11 and the resulting global “War on Terror.” During the first semester, the course focuses on the developing bipolar world as the defining force in world political relations from the end of World War II to the collapse of the Soviet Union.

372-373 From Hiroshima to 9/11 History - Part 2 (with Advanced option)**½ credit****grades 11-12**

During the second semester, the course focuses on the Middle East as a center of conflict and instability that affects international relations on the world stage. We examine the roots of the Palestinian-Israeli conflict, the establishment of the state of Israel, control of resources in the Middle East/North Africa, the impact of 9/11 on world international relations, relations with Iran, the Arab Awakening, and other current developments. Current events are an important component of our work throughout the course. The course is reading- and writing-intensive and includes both a research paper and many historical simulations and debates. **Advanced option prerequisites: 90 in prior department coursework, review of analytical reading and writing proficiency, and department approval**

346-347 Modern Asia (with Advanced option)**½ credit****grades 11-12**

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

356 Microeconomics**½ credit****grades 11-12****357 Macroeconomics****½ credit****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. 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 if 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.

Microeconomics focuses on the decisions made by individuals or firms. Macroeconomics investigates the dynamics of entire economy

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.

358-359 Modern Africa (with Advanced option)**½ credit****grades 11-12**

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

382-383 Asian-American Studies (with Advanced option) ½ credit grades 11-12

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

384-385 African-American Experience (with Advanced option) ½ credit grades 11-12

The purpose of this course is to allow students to take an in-depth look at a multitude of African-American experiences in the United States. This course starts with the theoretical work of W.E.B. Du Bois and Patricia Hill Collins to offer analytic tools for understanding both historic and contemporary issues faced by African American communities. Additionally, this course uses the historical work of Joe Feagin and the ethnographic work of Eduardo Bonilla Silva in order to analyze the manifestations of and resistance to racism in the US. These core texts are supplemented by films, including *Get Out*, *Hip Hop: Beyond Beats and Rhymes*, and *Bright*. The course moves between past histories and contemporary issues to offer students a window into what the experiences of African Americans say about the U.S. today. **(offered in 2020-2021) Advanced option prerequisites: 90 in prior department coursework, review of analytical reading and writing proficiency, and department approval**

337-339 World History (with Advanced option) Full year, ½ credit grades 10-12

This course examines world history from both a macro and micro lens. We begin with the Big Bang and continue to the present asking big questions about the nature of human history and the interconnectedness of living things. Much of the material for the course will come from the Big History Project curriculum, a program started by Bill Gates that uses chemistry, biology, economics, and sociology in addition to history to make sense of the world we live in. The culminating project in the course allows students to trace the complete history of an object, idea, invention, process, or technology of their choosing. This course is a half-credit and meets every-other day for both semesters. It is open to all students in grades 10-12, but is designed to allow music students to take a history course in conjunction with their music ensemble.

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 exposes students to a rigorous, theoretical development of symbolic, analytic, and graphical math systems. 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:

- **Exceptional rigor and challenge** for the most advanced math students
- **Flexibility in the curriculum**
- **In-depth exploratory projects** that apply math to wider applications
- **Emphasis on abstract reasoning skills and problem-solving skills**

Core Courses	Upper Level Math Courses	Computer Science Electives
Full Year: Algebra 1 Geometry* Algebra 2* Algebra 2 & Trigonometry (Adv) Functions Precalculus*	Full Year: Calculus 1* Calculus 2 (Adv) Statistics Semester: Linear Algebra (Adv) Multivariable Calculus (Adv) Math Independent Research (Adv)	Full Year: Computer Science 1* Semester: Introduction to Programming Mobile Application Development Website Development Computer-Aided Design Computer Science Independent Research (Adv)

Key: * Designates courses with Advanced option.

Course Descriptions:

512 Algebra 1

1 credit 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). **Prerequisite: Placement test**

522 Geometry

1 credit grades 9-11

523 Geometry (Advanced)

1 credit 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).

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). **Prerequisite: Algebra 1 Geometry (Advanced) Prerequisite: Algebra 1 (90 or higher) and department permission**

532 Algebra 2

1 credit grades 9-12

534 Algebra 2 (Advanced)

1 credit grades 9-12

Algebra 2 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.

Algebra 2 (Advanced) uses the same textbook as Algebra 2 but covers material in greater depth and at a faster pace. Successful completion of Algebra 2 (Advanced) prepares students to take Precalculus (Advanced).

Prerequisite: Geometry or Geometry Advanced

Prerequisite for Algebra 2 (Advanced): Geometry (90 or better) or Geometry (Advanced) and department permission

533 Algebra 2 & Trigonometry (Advanced)**1 credit****grades 9-12**

Algebra 2 & Trigonometry (Advanced) 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). **Prerequisite: Geometry (95 or better AND department permission) or Geometry (Advanced) (90 or better) AND department permission**

540 Functions with Math Modeling**1 credit****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. **Prerequisite: Algebra 2**

541 Precalculus**1 credit****grades 9-12**

Seeking to prepare students for Calculus, the 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. **Prerequisites: 85 or higher in Algebra 2, 80 or higher in Algebra 2 Adv, 90 or higher in Functions and department permission. This course covers material from the SAT math Level 2 test.**

542 Precalculus (Advanced)**1 credit****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 derivatives of polynomial functions. **Prerequisites: A grade of 90 or higher in Algebra 2, a grade of 80 or higher in Algebra 2 (Advanced) and department permission**

545 Statistics**1 credit****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. **Prerequisites: Algebra 2 and department permission**

550 Calculus 1**1 credit****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. **Prerequisites: Precalculus (80 or higher) and department permission**

551 Calculus 1 (Advanced)**1 credit****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. **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.**

561 Calculus 2 (Advanced)**1 credit****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 instructor.

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.*

562 Linear Algebra (Advanced)**½ credit****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. **Prerequisites:**

Calculus 2 with an 80 or higher and department permission

563 Multivariable Calculus (Advanced)**½ credit****grade 12**

In this course, students study Multivariable Calculus; including differential, integral, and vector calculus for functions of more than one variable. **Prerequisite:** **Linear Algebra and department permission**

COMPUTER SCIENCE

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

555-556 Computer Science 1 (Advanced option available)**1 credit****grades 10-12**

These courses provide the opportunity for students to bring their prior computer programming experience to bear on integrated problem investigations, analyses, and solutions. After initial programming challenges, students will solve problems from humanities, science, and math contexts and be coached in using data to investigate and analyze these questions. Emphasis is placed on the use of data, developing collaborative problem-solving capabilities, leadership, and presentation skills as students work on individual, team, and full-class projects. Computer Science 1 (Advanced) students will lead technical web and mobile app projects. **Prerequisites:** **Intro to Programming or programming team with robotics and a final grade of 80 or higher in one advanced level course in either history, English, or world languages, math or science, or department permission**

554 Introduction to Programming: Building with Software**½ credit****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, Java, and App Inventor. 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. **Prerequisites:** **a final grade of 75 or higher in Geometry, one full credit of science, and department permission**

557 Website Development**½ credit****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. **Prerequisites:** **Algebra 2, Introduction to Programming or equivalent work, and department permission.**

565 Mobile Application Development

½ credit

grades 10-12

This course provides an introduction to creating apps for mobile devices for students with some previous programming experience. App development is learned using the students’ own devices and Internet study tools. Emphasis placed on developing collaborative problem-solving capabilities and solving problems that matter as students work on individual, team, and full-class projects.

Prerequisite: Algebra 2, Intro to Programming or equivalent and department permission

567 Computer-Aided Design

½ credit

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. **Prerequisites: a semester each of Algebra 2, Physics, and 2D Art, 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 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 consider non-religious worldviews. We do this through exploration of sacred texts, student-centered discussions, and direct experience with followers of religious traditions. The curriculum fosters critical examination of ourselves in the world, diversity in the Westtown School community, and the role of religion in contemporary culture.

Students will have the following core experiences in the religion department:

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

Core Courses	Electives 2020-2021 One Required in Grade 11 or 12
<p>9th Grade: Quakerism in Life & Practice</p> <p>10th Grade: World Religions 1: Judaism & Christianity</p> <p>11th Grade: World Religions 2: Hinduism, Buddhism, & Islam</p>	<p>Semester: Business and the Good Society (Adv) Religion, Resistance, and Revolution* Religion, Gender, and Sexuality* Environmental Justice*</p> <p>Electives 2019-2020: Religion & Science* Beyond Belief*</p>

Key: * Designates courses with Advanced option.

Students in Advanced electives are held to a higher standard of academic rigor, including the completion of three or more additional and 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:

700 Quakerism in Life and Practice

¼ credit

grades 9-10

This course, required of all 9th and 10th grade students, introduces students to Quakerism and the way in which Quakerism impacts life at Westtown as well as the larger world. Students will examine Quaker history, practice, and testimonies and the ways in which these testimonies manifest in current events and daily life. Class will include an online component for submission of work. This course relies heavily on individual participation, as students examine their own participation in creating a life which values the good in others and a society based on respect, integrity, and equality.

711 World Religions 1: Judaism & Christianity

½ credit

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 read sacred texts and an understanding of the diversity within both traditions.

712 World Religions 2: Hinduism, Buddhism, Islam

½ credit

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. **Prerequisite: World Religions 1. Sophomores who wish to take World Religions 2 in the second semester may do so with department approval.**

703-713 Religion, Resistance, and Revolution (with Advanced option) ½ credit

grades 11-12

Religion, Resistance, and Revolution examines the intersection between religion and social uprising in the face of injustice. The course will examine 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. We will explore the Israel/Palestine conflict, the intersection of Black Theology and Black Lives Matter, Dorothy Day, Cesar Chavez, and others. 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. **Prerequisite: World Religions 1**

706-716 Religion, Gender, and Sexuality (with Advanced option) ½ credit

grades 11-12

This course is about how gender and sexuality are expressed through religious ideas and 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. **Prerequisite: World Religions 1 & 2**

708-718 Environmental Justice (with Advanced option) ½ credit grades 11-12

Climate change has deep and considerable implications for human life and for justice in the world. The recent crisis in Syria, for example, and all of its implications was set in motion by devastating famine and drought that caused a population surge and civil conflict. Meanwhile, the denial of climate change still persists with significant implications for policy and practice. This course examines the current environmental crisis with a particular lens on the implications for religion, social justice, and human rights. We start by examining the ways in which both western religious and scientific thought have shaped western worldview toward the environment, in both harmful and helpful ways. Students then sift through a series of recent case studies from around the globe to examine current issues and manifestations of the many implications of climate change, public policy, and events. We review case studies of environmental injustice and racism from around the globe, including the Dakota Access Pipeline, the Flint water crisis, and Chester city dumping. We also look at industry causes of global warming including ranching, deforestation, and the production and use of plastic. Throughout the course, students will journal about their experience as well as their own observations and analysis of their relationship to the natural world. Students will analyze and reflect upon their own carbon footprint as well as that of Westtown School. **Prerequisite: World Religions 1 & 2; with departmental approval, students may take World Religions 2 simultaneously**

710 Business and the Good Society (Advanced) ½ credit grades 11-12

In 2006, the Nobel Peace Prize was awarded to Muhammad Yunus and Grameen Bank – an unusual recognition of the deep humanitarian opportunities that exist within the business community. Building on this intention, Business and the Good Society is an applied religion course about the immense power of the business community. The dual objectives of the course are for students to understand how business works, and to be inspired by the potential for business to be a significant force for good. Students explore a variety of sectors of the economy, from green building and impact investing to sustainable agriculture and consumer products. The course combines field trips, guest lectures, group projects, current and classic spiritual and business readings, and extensive journaling to engage students with the creative tension and opportunity of applying ethical norms in the real-world context of the marketplace. Students work together on a number of small group projects, highlighted by a capstone experience developing a viable business plan that addresses a significant social or environmental issue. **Prerequisite: World Religions 1 & 2. Students must have achieved a minimum grade of 90% in either World Religions 2 or another Religion elective. Otherwise, students may petition the department for approval. With departmental approval, students may take World Religions 2 simultaneously.**

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, and a deeper understanding of this impact can produce individuals better able to live in and guide the world with responsible stewardship.

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
- Collaborating with peers and adults

Core Courses-Required	Conceptual Physics 1 and 2 Physics 1 and 2 with Trigonometry (Adv) Chemistry 1* and 2* Biology 1* and 2*	
Biology Electives	Environmental Science Electives	Research
Evolution (Adv) Anatomy & Physiology (Adv) Biology of Disease (2020-21) Biology of Sexuality & Drugs (2019- 20)	Environmental Science 1* Environmental Science 2* Environmental Research (Adv)	Scientific Research (Adv)
Physics Electives	Chemistry Electives	Additional Courses
Electricity & Magnetism (Adv) Modern Physics (Adv) Astrophysics (2020-21) Digital Electronics (2019-20)	Chemical Reactions (Adv) Chemical Bonding (Adv) Applied Chemistry	Design Engineering 1, 2 Design Engineering 3 (Adv)

Key: * Designates courses with Advanced option.

Course Descriptions:

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

610 Conceptual Physics 1

½ credit

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.

611 Physics 1 with Trigonometry (Advanced)

½ credit

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. **Placement test required for the Advanced course**

612-613 Chemistry 1: Atoms to Reactions (with Advanced Option)

½ credit

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.

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.

Placement test required for the Advanced course

Foundation Year 2: Life Sciences – Biology and Ecology

614 Biology 1: Cell & Molecular Biology **½ credit** **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. **Prerequisites: Physics 1 & Chemistry 1**

615 Biology 1: Cell & Molecular Biology (Advanced) **½ credit** **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. **Prerequisites: Physics 1 (Advanced) & Chemistry 1 (Advanced) (85 or above) or Physics 1 & Chemistry 1 (90 or above and departmental approval)**

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

625 Biology 2: Ecology (Advanced) **½ credit** **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. **Prerequisite: Biology 1 (Advanced) (85 or above) or Biology 1 (90 or above and department approval)**

Upper Level Electives**Biology options:**

632 Evolution (Advanced) **½ credit** **grades 11-12**
This course covers a variety of topics in modern evolutionary biology, including mechanisms of evolution, population genetics, speciation, and macroevolution. Depending on student interest, additional topics may include behavioral ecology, evolutionary developmental biology (evo-devo), and human evolution. Students will hone skills in experimental design, data collection and analysis, scientific communication, and use of primary literature. As a project-based course, Evolution (Advanced) demands a high degree of independent thinking and learning, as well as extensive collaboration with peers. **Prerequisites: Biology 2 (Advanced) and department approval**

642 Anatomy and Physiology (Advanced) **½ credit** **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. **Prerequisites: Biology 2 (Advanced) and department approval**

634 Biology of Disease**½ credit****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 study of the microscopic anatomy), 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.

Prerequisites: Biology 1 & 2 (May be taken concurrently with Biology 2) (Offered in 2020-21)

Chemistry Options:**622-623 Chemistry 2: Moles and Stoichiometry (with Advanced Option)****½ credit****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. **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.

Prerequisite: Chemistry 1 (Advanced) (85 or above) or Chemistry 1 (90 or above and department approval)

631 Chemical Bonding (Advanced)**½ credit****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. **Prerequisites: Chemistry 2 (Advanced) and department approval**

641 Chemical Reactions (Advanced)**½ credit****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.

Prerequisites: Chemistry 2 (Advanced) and department approval

646 Applied Chemistry**½ credit****grades 10-12**

This inquiry-based course seeks to demystify the science of the things that we encounter everyday. The course will examine the chemistry of food, will analyze what makes our food taste so 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. **Prerequisite: Chemistry 2**

Environmental Science Options:**616-626 Environmental Science 1 (with Advanced option) ½ credit 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.

Advanced students will complete an independent research project; the final product will be a scientific poster that will be showcased in Westtown's Science Fair. 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. **Prerequisites: Biology 1 (may be concurrently enrolled). Advanced may be taken with department approval.**

626-627 Environmental Science 2 (with Advanced option) ½ credit 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. This course focuses on some of the most pressing environmental issues facing humans today: industrial agriculture and consumerism. Westtown's 600-acre campus will be our classroom as students investigate soil quality and the surrounding plants and wildlife. Topics include population growth, waste management, "fast fashion," food resources, sustainable agriculture, land-use policies as they relate to social justice issues, and genetically-modified organisms. A key component of this course will be reading scientific journal articles in order to form an informed opinion on genetically modified organisms. Students will hone their technical writing and speaking skills and will practice reading scholarly articles.

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

629 Environmental Research (Advanced) ½ credit 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. **Prerequisite: Advanced Environmental Science 1 or 2 (90 or above and department approval)**

Physics Options:**620 Conceptual Physics 2 ½ credit 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. **Prerequisite: Physics 1**

621 Physics 2 with Trigonometry (Advanced) ½ credit 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. **Prerequisite: Physics 1 with Trigonometry (Advanced) (85 or above) or Conceptual Physics 1 (90 or above and department approval)**

630 Electricity and Magnetism (Advanced) ½ credit 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. **Prerequisites: Physics 2 with Trigonometry (Advanced) and department approval; Co-requisite: Calculus 1 (Advanced)**

640 Modern Physics (Advanced) ½ credit 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. **Prerequisites: Physics 2 with Trigonometry (Advanced) and department approval; Co-requisite: Calculus 1 (Advanced)**

635 Astrophysics ½ credit grades 11-12
This survey course provides an introduction to the physics of the universe. Students interested in the field will gain an understanding of the behavior of celestial objects and how they interact with each other. By first studying the history of astronomy, students will appreciate how the way in which we look at the sky has changed over time. The focus will be extended outward to study our own solar system, and then on to other galaxies. Stellar processes, including their birth and evolution, will be explored, as will the evolution and eventual fate of the broader universe. Students should be capable of doing independent work and be willing to participate in class discussions. **Prerequisites: Conceptual Physics 1 (Offered in 2020-21)**

Research and Design Engineering Options:

653 Scientific Research (Advanced) 1 credit 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. **Prerequisites: one full credit each of physics, chemistry, and biology with grades of 95 or higher (90 or higher if Advanced), in addition to department approval**

650-654 Design Engineering 1, 2, 3 (Advanced) ½ credit grades 10-12
Based upon a design studio/incubator/startup model for seeking solutions to real-world challenges, Design Engineering 1 will first teach students how to plan, research, timeline, and pitch projects, then create collaborative teams to create engineered products. Students who complete Design Engineering 1 will be prepared to take on the more complex, self-initiated challenges of Design Engineering 2. Design Engineering 3 can be pursued by students who wish to take their work (typically begun in Design Engineering 2) through an Independent Research model. Design Engineering 2 and Design Engineering 3 (Advanced) may be taken with department approval.

Co-curricular science activity:**ROBOTICS**

The Westtown Robotics team is part of FIRST (For Inspiration and Recognition of Science & Technology), an organization which creates a dynamic link between science and technology. The Westtown team, number 1391 – the Metal Moose – has a seventeen-year history of developing 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. Students on this team are enthusiastic about robotics and solving problems together creatively. Team 1391 has been awarded 20 engineering, programming, and design awards in fourteen years, has competed at seven World Championships over the past decade, and has been awarded the prestigious Engineering Inspiration and Chairman's awards, which recognize and honor FIRST teams that represent the highest ideals of this international program.

WORLD AND CLASSICAL LANGUAGES

Students are required to take at least two consecutive years of a single foreign language in grades 9th and 10th; we recommend that they take at least three years of a foreign language. While 70 is a passing grade to receive credit, students with a grade below 80 are expected to complete work over the summer to remediate their skills in order to achieve the expected proficiency to proceed on to the next level of study.

Department Philosophy

The World and Classical Languages Department aims to prepare the Westtown students for a 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, Rome, and the Francophone world, where participants gain first-hand immersion experience and close connections with local people

Chinese	French	Latin	Spanish
Chinese 1, 2, 3, 4 (Adv), 5 (Adv), 6 (Adv)	French 1, 2, 3, 4 (Adv), 5 (Adv), 6 (Adv)	Latin 1, 2, 3, 4 (Adv), 5 (Adv),	Spanish 1, 2, 3, 4 (Adv), 5 (Adv), 6 (Adv)

Courses Descriptions:**FRENCH****411 French 1****1 credit****grades 9-12**

This course introduces students to the basic principles of the French 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 French, and to read simple narratives in the language using the present tense to a high degree of proficiency. Students will be introduced to the many and different cultures of French-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.

412 French 2**1 credit****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.

413 French 3**1 credit****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 action-based 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.

414 French 4 (Advanced)**1 credit****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. ***Students must have achieved said level of proficiency and have an 85% or above to be promoted to the next level.***

415-416 French 5 & 6 (Advanced)**1 credit****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. ***Students must have achieved said level of proficiency and have an 85% or above to be promoted to the next level.***

CHINESE**481 Chinese 1****1 credit****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 using memorized words and phrases; 2) respond to simple questions; 3) understand words and phrases on very familiar topics; 4) provide information about oneself; and 5) recognize 200 characters and reproduce approximately 150 characters.

482 Chinese 2**1 credit****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; 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.

483 Chinese 3**1 credit****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 basic 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, and preferences; 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.

484 Chinese 4 (Advanced)**1 credit****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. ***Students must have achieved said level of proficiency and have an 85% or above to be promoted to the next level.***

485-486 Chinese 5 & 6 (Advanced)**1 credit****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, the 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. **Students must have achieved said level of proficiency and have an 85% or above to be promoted to the next level.**

SPANISH**450 Spanish 1****1 credit****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.

452 Spanish 2**1 credit****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.

453 Spanish 3**1 credit****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 action-based 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.

454 Spanish 4 (Advanced)**1 credit****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 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. **Grade of 85% in Spanish 3 and department approval is required.**

455-456 Spanish 5 & 6 (Advanced)**1 credit****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. **Grade of 85% or above and department approval is required.**

LATIN

As a classical language, the study of Latin must be considered somewhat separately from the study of modern languages. Although there is a similar attention given to learning grammar, vocabulary, history, and culture, there are notable differences. 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.

471 Latin 1**1 credit****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.

472 Latin 2**1 credit****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.

473 Latin 3**1 credit****grades 9-12**

For third year Latin students, 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. ***This curriculum alternates annually with the Latin 4 curriculum below.***

474 Latin 4 (Advanced)**1 credit****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. ***This curriculum alternates annually with the Latin 3 curriculum above.***

475 Latin 5**1 credit****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.

INDEPENDENT STUDIES

Students may select from several interdisciplinary fields of study to explore topics that complement their program, offering opportunities for individual project design and first-hand experience in carrying out an extended, applied research or creative project.

Independent Study (Advanced)**½ credit****grades 10 - 12****499 Language Independent Study (Adv)****590 Computer Science Independent Study (Adv)****599 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.

980 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. There are over 2000 four-year colleges in the U.S., ranging from large public universities to small private colleges to art and technical schools to a variety of choices in between. Westtown graduates are well-prepared for and have chosen many different options, evidenced by the diversity of Westtown's matriculation list. 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 fall Multicultural Conference and College Fair is a signature event to which 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.

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

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

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

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

- AP Seminar
- AP Research
- Computer Science Principles

DISTINGUISHING PROGRAMS

Westtown students live and learn alongside students from around the world because the residential program typically enrolls students from 17 countries in North and South America, Asia, Africa, Europe, and Australia. 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. Students lead activities in both classroom and community life, design projects that put their beliefs and understanding of the world into action, and collaborate with others. The selection of programs below demonstrates some of the opportunities available in our program.

GLOBAL CONNECTIONS: LIVING AND LEARNING IN A CONNECTED WORLD

International Experiences and Senior Project Faculty-led Trips. Please note: Not all global program trips are offered each year. World Language trips are biennial.

GHANA: Heritage Academy, Breman Essiam, Ghana—In 2004, former Westtown faculty member and Ghanaian citizen, Kwesi Koomson, founded Heritage Academy, a pre-K through 12th grade school for children in his hometown of Breman Essiam, Ghana. Since 2008, Heritage Academy has hosted Westtown students for two-weeks at the end of the winter term, giving students an opportunity to teach and work in partnership with Heritage Academy, and to complete a service project that the school requests. This trip gives students an authentic opportunity to better understand both the cycle of poverty and to witness and experience ways to help break it. Students also visit culturally and historically significant sites, such as the slave castles on Cape Coast, the bustling marketplace of Mankessim, and Kakum National Park. *(This trip fulfills the 40-hour service requirement.)*

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.

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.

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.

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.

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.

MEXICO: Las Cañadas, Huatusco, Mexico—Westtown's Quaker Leadership Program offers a summer work camp at Las Cañadas focusing on cloud-forest conservation, sustainable development, and cultural immersion. Up to twelve students will have the opportunity to work in an eco-village setting through small-group projects, ecological restoration work, meetings with local experts, and interactive social justice work. **(Late June-July, open to 10th, 11th or 12th grade students)**

Francophone World

With the number of francophones growing, at Westtown we value the variety and specificities of each region, island, and country. The Westtown French language trips are designed to immerse the students in the French language through authentic experiences with native speakers. We aim to focus on community engagement through a variety of immersive language and cultural activities such as participating in art, history, and cultural workshops and projects. Past trips have alternated between Paris, France, Guadeloupe, and Martinique. Students are expected to be submerged in the culture, to hear, understand, and communicate in the language.

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

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 STUDENT PROGRAM**Distinguishing Features:**

- Diverse countries of origin with limited numbers of students from any one language group
- An International Student Coordinator
- International Student Organization which sponsors a variety of special events
- A host family program in which international students are matched with local families
- Biweekly meetings with all international students coordinated by the International Student Coordinator to discuss a wide range of issues in school and community life

LEADERSHIP & EXPERIENTIAL LEARNING

LEADERSHIP OPPORTUNITIES: Westtown has many leadership positions including the Student Body Presidents, Work Program Heads, Chief Prefects, Prefects, Proctors, Class Officers, Weekend Program Heads, Peer Tutors, 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. ***In the summer, the Quaker Leadership Program leads a number of community service programs open to all students.***

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.

In order to fulfill its mission, Westtown is committed to making service an integral part of a Westtown education. In order for a student's transcript to be sent to the college where matriculation will take place, students must complete an intensive service activity for a minimum of 40 hours. Students may choose from one of the following options:

- Participation in one term of the Service Network Co-Curricular – offered, fall, winter & spring
- Participate in a Westtown-sponsored service project during summer vacation or Senior Projects
- Propose an independently designed project of 40 hours during the school year or during a vacation

Additional written paperwork is required for each student participating in each of these options and may include a proposal, (for independent projects only) and self-evaluation, personal reflection, supervisor evaluation and an hours log.

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.

ACADEMIC RESOURCES

Learning Center

The Learning Center is open to all students in the Upper School, assisting students in achieving academic success. It provides an ideal group study location during free periods daily as well as during evening study hall hours. History, language, religion, and science teachers staff study halls in the Learning Center as well, offering another opportunity for students to seek feedback and guidance from classroom teachers. In addition, the Learning Center coordinates support for students in establishing effective study strategies on a drop-in basis.

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 testing. The school follows the guidelines established by the College Board for students with disabilities.

Math Lab and Peer Tutoring: The Math Department offers math lab help during free periods, staffed by math teachers and peer tutors. In addition, peer tutors work closely with the Math Department and Math Club to support students who request help.

Writing Center and Writing Fellows Program: The English Department runs the Writing Center with support from English teachers and student Writing Fellows. 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.

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.

Athletics, Performing Arts, Experiential Activities

FALL	WINTER	SPRING
Interscholastic Athletics	Interscholastic Athletics	Interscholastic Athletics
Cross Country	Basketball	Baseball
Field Hockey	Indoor Track	Golf
Soccer	Rock Climbing	Lacrosse
Tennis	Swimming	Softball
	Wrestling	Tennis
		Track & Field
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	Winter Running	
	Yoga	
Performing Arts	Performing Arts	Performing Arts
Dance	Dance	Dance
Theater: Fall Play	Theater: Musical	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

2020-2021

Arts 1.5 credits	<p>Art Intro to Studio Art: 2D Intro to Studio Art: 3D Drawing & Painting 1,2 Photography & Digital Art 1,2 Ceramics 1,2 Sculpture 1,2 Woodworking 1,2,3 (Adv) Studio Art (Adv)</p>	<p>Music Choral Arts 1,2,3,4 (Adv) Symphonic Band 1,2,3,4 (Adv) Jazz Ensemble 1,2,3,4 (Adv) String Orchestra 1,2,3,4 (Adv) Applied Music 1,2,3 (Adv), 4 (Adv) Intro to Guitar Digital Music & Production 1,2</p>	<p>Theater Elements of Theater 1,2 Acting Workshop Theater Arts (Adv) Performing Arts Tutorial (Adv)</p>	
English 4 credits	<p>Core Courses Perspectives in Literature (9th) American Literature (10th) Contemporary World Literature (11th) The Essay (12th)</p>	<p>Electives–Must take one in 11th and one in 12th grade 20th Century Dramatic Literature 2: Writing About Film American Literature 2 (Adv) Creative Writing (Adv) Nonfiction Writing 2: Black Identity & Society World Mythology</p>		
Health	<p>Health & Life Skills- Junior Seminar - Senior Seminar Elective: Ethical Communication</p>			
History 2 credits	<p>Core Courses Peace & Justice U.S. History</p>	<p>Electives: From Hiroshima to 9-11 (Part I) From Hiroshima to 9-11 (Part II) Microeconomics Macroeconomics</p>	<p>Modern Africa Modern African-American Experience Modern Asia Modern Asia-American Experience World History</p>	
Math 3 credits	<p>Algebra 1 Geometry Algebra 2 Algebra 2 & Trig (Adv)</p>	<p>Precalculus Functions Calculus 1 Statistics</p>	<p>Calculus 2 (Adv) Linear Algebra (Adv) Multivariable Calculus (Adv) Computer Science 1</p>	<p>Intro to Programming Website Development Computer-Aided Design Mobile App Development</p>
Religion 1.75 credits	<p>Core Courses Quakerism in Life & Practice World Religions 1: Judaism & Christianity World Religions 2: Hinduism, Buddhism, Islam</p>		<p>Electives: Business & the Good Society (Adv) Environmental Justice Religion, Gender, & Sexuality Religion, Resistance, & Revolution</p>	
Science 2 credits	<p>Core Courses Physics 1 & Chemistry 1 Biology 1 & Biology 2 Physics 2 & Chemistry 2</p>	<p>Biology Electives Evolution (Adv) Anatomy & Physiology (Adv) Biology of Disease</p> <p>Physics Electives Electricity & Magnetism (Adv) Modern Physics (Adv) Astrophysics</p>	<p>Environmental Science Electives Environmental Science 1,2 Environmental Research (Adv)</p> <p>Research Scientific Research (Adv)</p>	<p>Chemistry Electives Chemical Reactions (Adv) Chemical Bonding (Adv) Applied Chemistry</p> <p>Design Engineering Design Engineering 1,2 Design Engineering 3 (Adv)</p>
World & Classical Languages 2 credits	<p>Chinese 1, 2, 3, 4 (Adv), 5 (Adv) Latin 1, 2, 3, 4 (Adv), 5 (Adv) French 1, 2, 3, 4 (Adv), 5 (Adv), 6 (Adv) Spanish 1, 2, 3, 4 (Adv), 5 (Adv), 6 (Adv)</p>		<p>English Language and Composition 1,2 English Literature and Language Seminar (Adv)</p>	
Independent Study	<p>Math - Computer Science - World Languages</p>			

WESTTOWN SCHOOL SUMMER COURSES

2020

DEPARTMENT	COURSES AND CREDITS
History	Microeconomics (.5 credit) (Online) Macroeconomics (.5 credit) (Online) U.S. History (1 credit) (Online) World History (.5 credit) (Online)
Math	Geometry (1 credit) Statistics (1 credit) (Online)
Religion	World Religions 1: Judiasm & Christianity (.5 credit) World Religions 2: Buddhism, Hinduism, Islam (.5 credit)
Westtown Science Institute (rising 9th grade)	3D World Assistive Mobility: Design. Build. Donate Submersible Robots & Underwater Exploration Tiny House Nation
Westtown Science Institute (rising 11th and 12th grade)	Westtown Entrepreneurship Bootcamp: Tackling the University of Delaware Diamond Challenge <i>Note: this opportunity is by selective admission through an application process</i>

Additional Summer Opportunities:

- Create a Service Project near home – complete your 40 Service Requirement
- Get a summer job
- Explore a passion – immerse yourself in art, reading, nature
- Reconnect with family and your home culture

WESTTOWN UPPER SCHOOL COURSE PLANNING WORKSHEET

2020-2021

	9 TH GRADE	10 TH GRADE	11 TH GRADE	12 TH GRADE
English - 4 Credits	Perspectives in Literature			The Essay
History - 3 Credits				
Language - 3 Credits				
Math - 4 Credits				
Science - 3 Credits				
Religion - 1.75 Credits				
Arts - 1.5 Credits				
Health & Seminars	Health		Junior Seminar	Senior Seminar <hr/> Senior Project
Additional Course(s) (Optional)				

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

