



MERCERSBURG ACADEMY

**Course Catalog
2022-23**

Table of Contents

Table of Contents	1
Course Diagrams	7
Arts	17
Course diagram	17
Dance	19
Introduction to Dance	19
Hip-Hop Dance & Culture	19
Ballet Technique I	19
Pointe Technique I	19
Dance Composition I	20
Dance Composition II	20
Dance Composition III	20
Theatre	20
Introduction to Theatre	21
Acting Studio 1	21
Stage Combat	21
Stage Combat II	21
Practical Design & Production	22
Speech	22
Shakespeare in Performance	22
Music	22
Advanced Performance with Chorale	23
Advanced Performance with Band	23
Band Performance	23
Choral Performance	24
String Performance	24
Mixing Music in the Digital Age	24
Mixing Music in the Digital Age II	25
Visual Arts	25
Digital Photography	25
Digital Photography II	25
Digital Video Art	26
Digital Imaging	26
Publications - Design, and Production in Modern Publishing I	26

Publications - Design, and Production in Modern Publishing II "SPRING.	27
Drawing I	27
Drawing II	27
Painting I	27
Painting II	28
Advanced Studies: Studio Arts	28
Voice and Vision	28
Ceramics I	29
Ceramics II	29
Advanced Topics in Ceramics	29
English	30
Course diagram	31
9th grade	32
Introduction to Literary Arts	32
10th grade	32
Power, Justice and Authority	32
11th grade	32
Advanced Studies: Language, Rhetoric, and Composition	33
Wanderlust and Identity in American Literature	33
12th grade	33
Advanced Studies: Literature and Composition	33
Term courses	34
Gender, Race, and Sexuality in Shakespeare	34
Fantasy Literature	34
Introduction to Film Studies	35
The Art of Poetry	35
The Art of Fiction	36
In Pursuit of the Essay	36
American Plays	36
Contemporary Poetic Theory: Shifting Soundscapes	37
Graphic Novels	37
Existentialism in Literature	38
Introduction to Journalism	38
Shakespeare and Performance	38
Beyond Borders	39
Post-Apocalyptic Fiction	39
Art Cinema	39
Indigenous Peoples	40

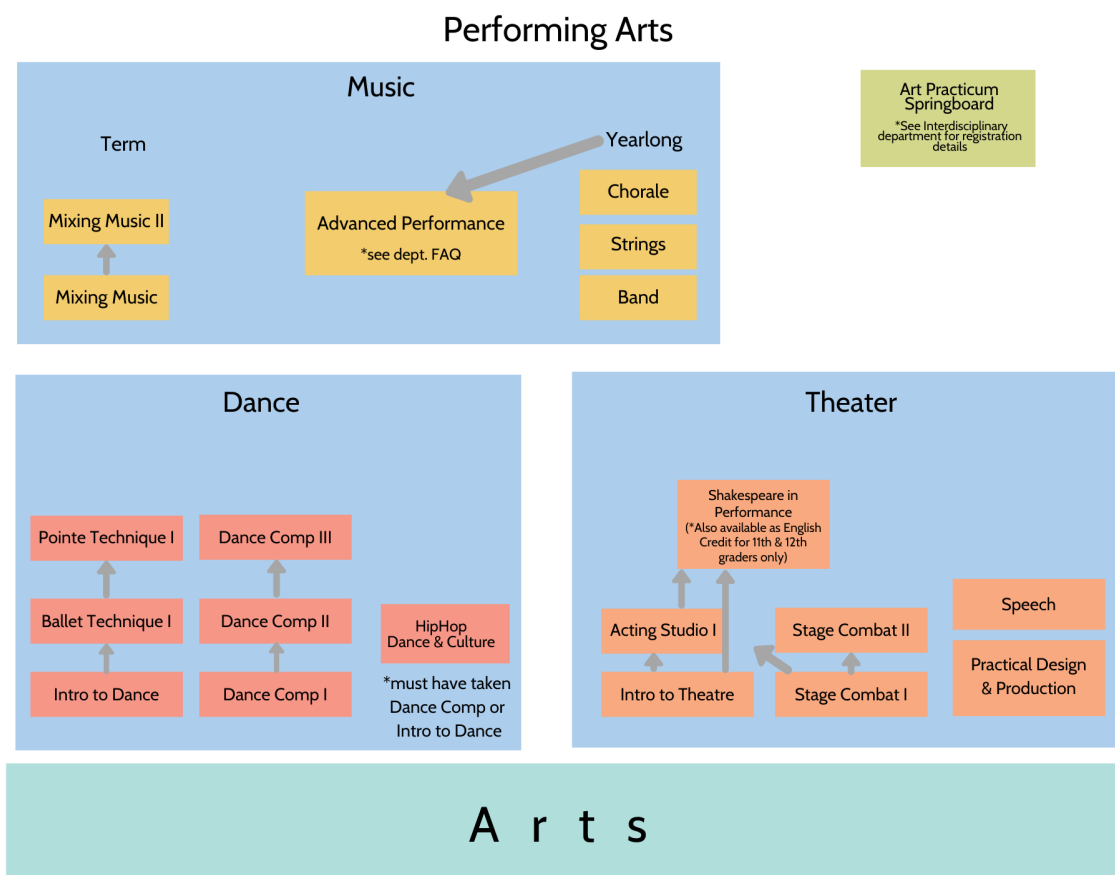
	3
Introduction to Professional Criticism	40
The Little Magazines: Editing and Publishing	41
History	41
Course diagram	42
Course Descriptions	43
Ancient Mediterranean World	43
Human Geography	43
World History	43
Honors World History	44
American Studies	44
History of the United States	44
Making of the 21st Century: The Quinn-Ferguson Honors Seminar	45
Advanced Studies: Comparative Government and Politics	46
Advanced Studies: United States History	46
Advanced Studies: Economics	46
AS: History of Race and Ethnicity in the US-Foundations of Ethnic History in the Americas	47
AS: History of Race and Ethnicity in the US-The Immigrant Experience	47
AS: History of Race and Ethnicity in the US-The Civil Rights Era and Beyond	47
Interdisciplinary	49
Course diagram	49
Springboard	50
Maker's Lab	50
Springboard: Open Topic	50
Positive Psychology	50
Mercersburg's History	50
Application Design	51
Write Your Novel...	51
Research Science Capstone	51
Arts Practicum	52
Entrepreneurship	52
Food for Thought	52
MAPS	52
Thought, Knowledge, and Belief - MAPS Core Course	53
Global Studies Research Thesis - MAPS Core Course	53
Languages	54
Course diagram	55
Chinese	55

First Year Chinese	56
Second Year Chinese	56
Third Year Chinese	56
Fourth Year Chinese	56
Advanced Studies: Chinese Language and Culture	57
Spanish	57
First Year Spanish	57
Second Year Spanish	57
Honors Second Year Spanish	58
Third Year Spanish	58
Honors Third Year Spanish	58
Fourth Year Spanish	59
Advanced Studies: Spanish Language and Culture	59
Advanced Studies: Survey of Hispanic Literature	59
French	59
First Year French	60
Second Year French	60
Honors Second Year French	60
Third Year French	60
Honors Third Year French	61
Fourth Year French	61
French History and Literature	61
Advanced Studies: French Language and Culture	62
Advanced Studies: Francophone History, Literature, and Culture	62
Latin	62
First Year Latin	62
Honors Second Year Latin	63
Third Year Latin	63
Honors Third Year Latin	63
Fourth Year Latin	64
Advanced Studies: Latin Vergil-Caesar	64
Advanced Studies: Ovid	64
Advanced Studies: Horace	64
Advanced Studies: Latin Literature	64
German	65
Directed Study: Advanced German	65
Math	65
Course diagram	66

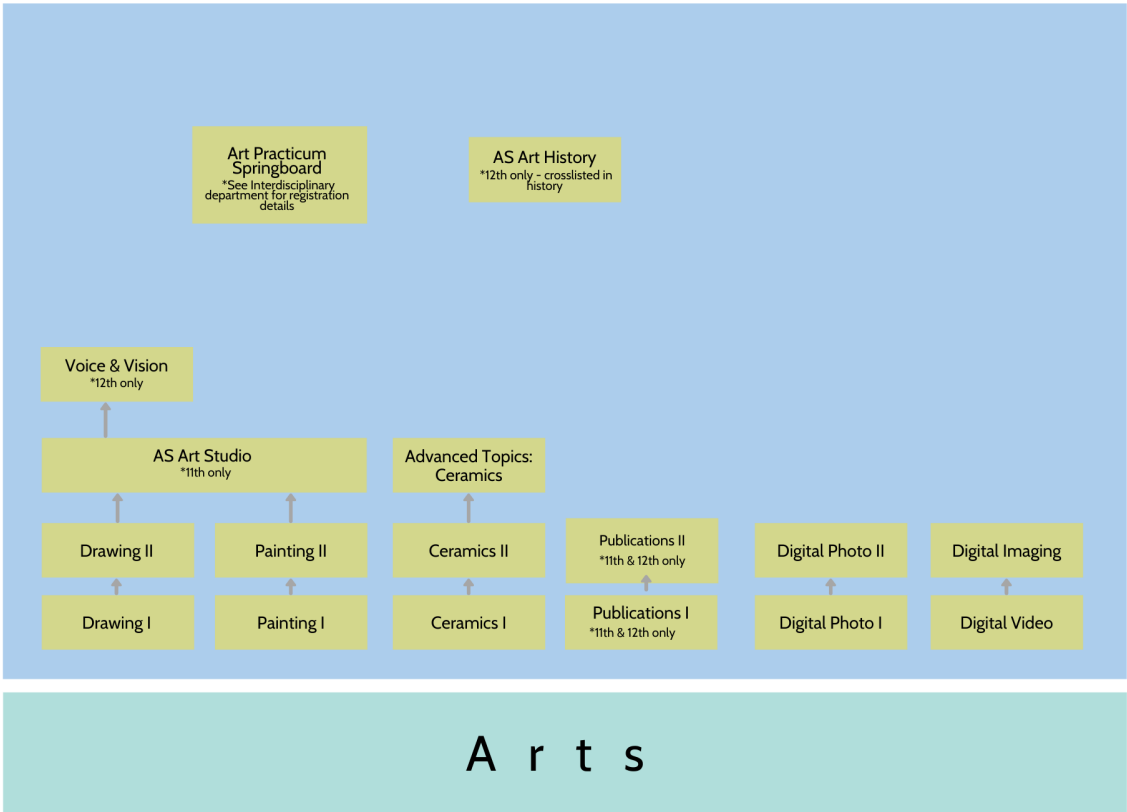
Course Descriptions	67
Algebra I	67
Geometry	67
Accelerated Geometry	67
Algebra II	67
Honors Algebra II	67
Statistics	68
Advanced Studies: Statistics	68
Advanced Studies: Economics	68
Precalculus	68
Accelerated Precalculus	69
Honors Precalculus	69
Calculus	69
Advanced Studies: Calculus I	70
Advanced Studies: Calculus II	70
Advanced Studies: Calculus III	70
Advanced Studies: Linear Algebra with Applications	71
Foundations of Technology	71
Robotics I	71
Robotics II	71
Robotics III	72
Introduction to Computer Science	72
Advanced Studies: Computer Science I	72
Advanced Studies: Computer Science II	72
Religion	74
Course Diagram	74
Course Descriptions	75
Understanding Religion: The Amish	75
Introduction to New Testament: The Gospels Through Stained Glass	75
Introduction to World Religions	75
The Nature and Meaning of the Universe	75
Science	76
Course diagram	77
Course Descriptions	78
Biology: Introduction to Biology	78
Applied Human Anatomy & Physiology	78
Advanced Studies: Biology	79
Advanced Studies: Environmental Science	79

Stream and Estuarine Ecology	80
Introduction to Biotechnology and Genetics	80
Forensic Science	81
Chemistry	81
Honors Chemistry	81
Advanced Studies: Chemistry	81
Advanced Studies: Organic Chemistry	82
Physics	82
Honors Physics	82
Advanced Studies: Physics C Mechanics	83
Advanced Studies: Physics C Electricity & Magnetism / Mechanics	83

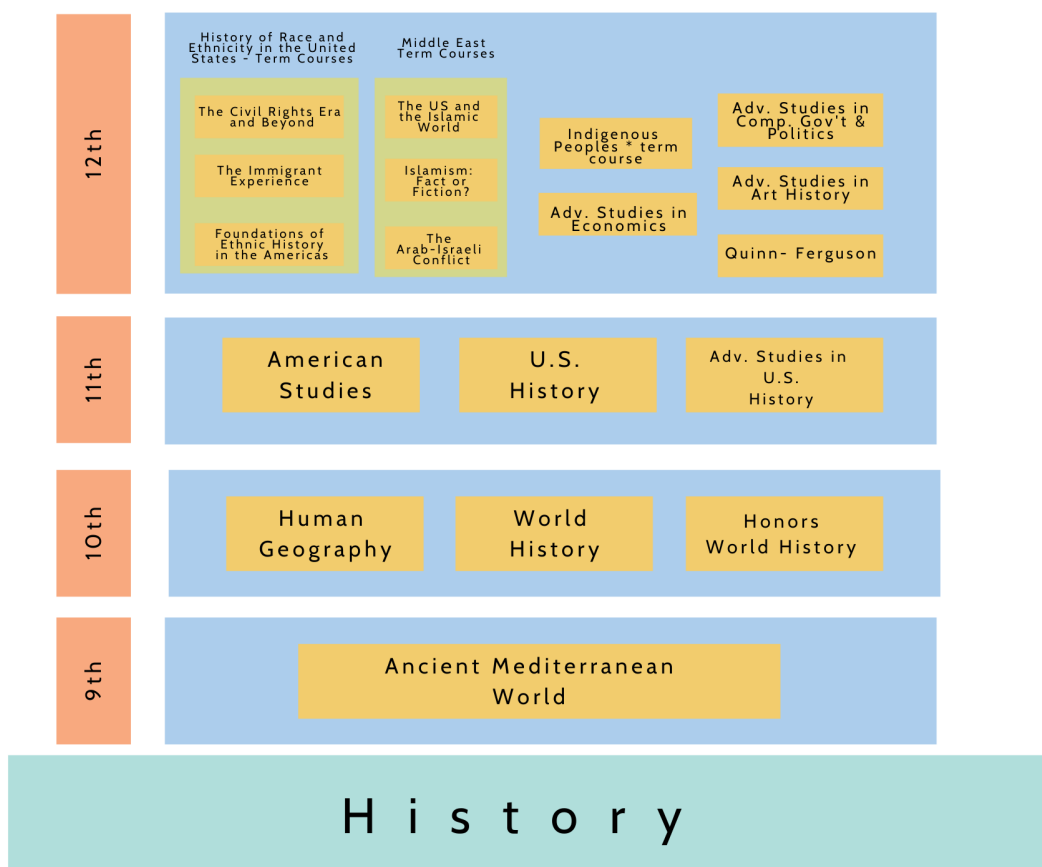
Course Diagrams

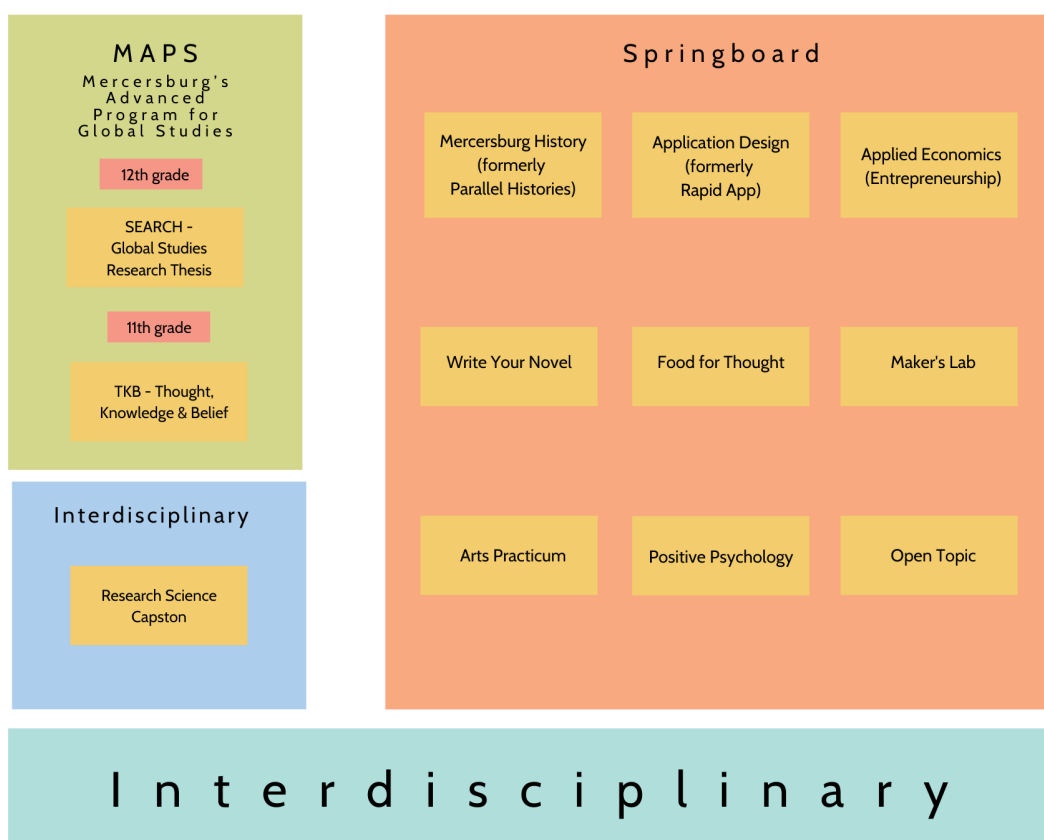


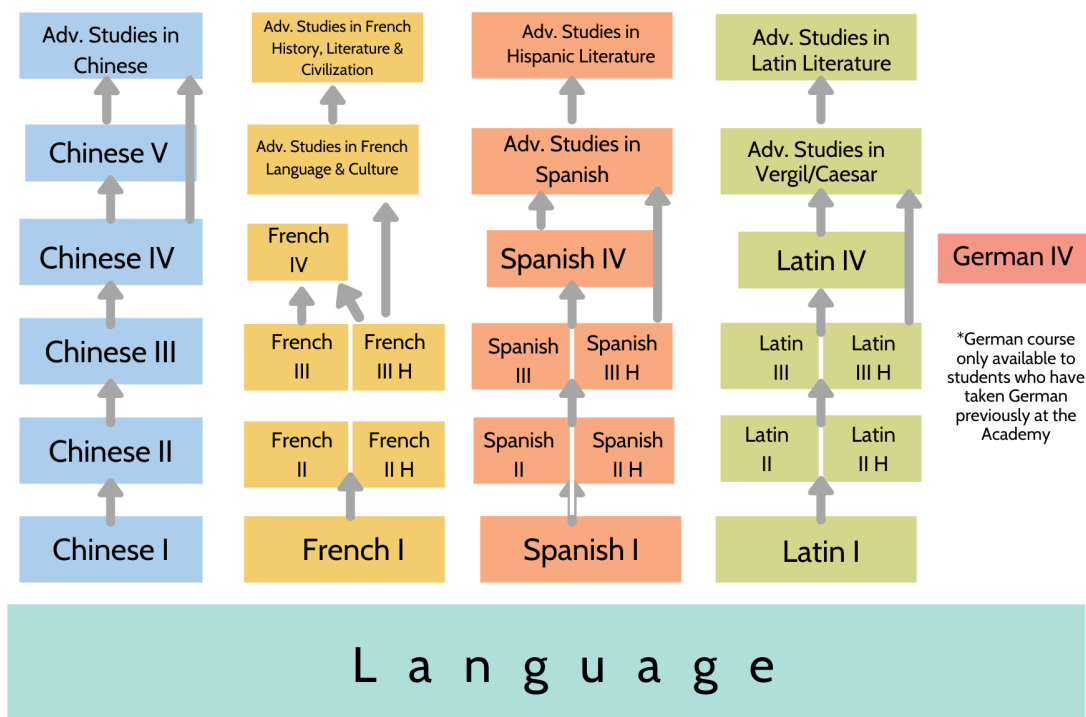
Visual Arts

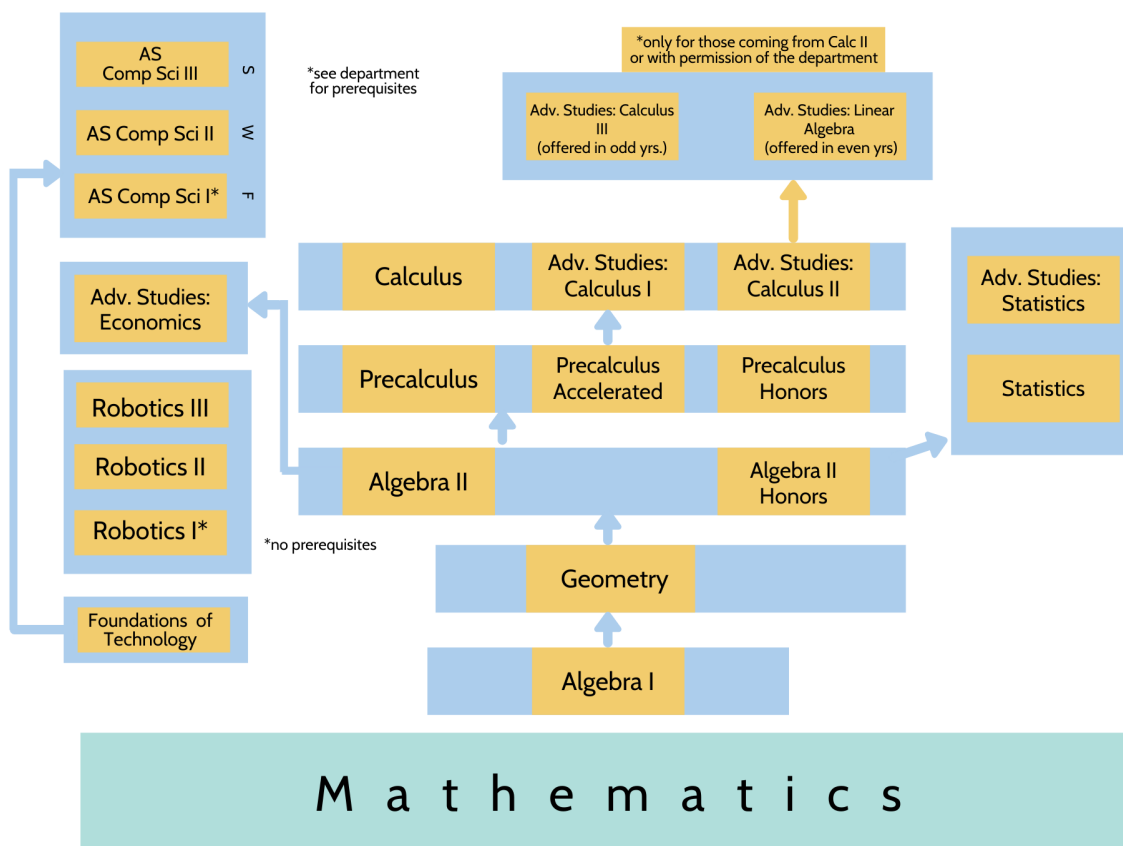


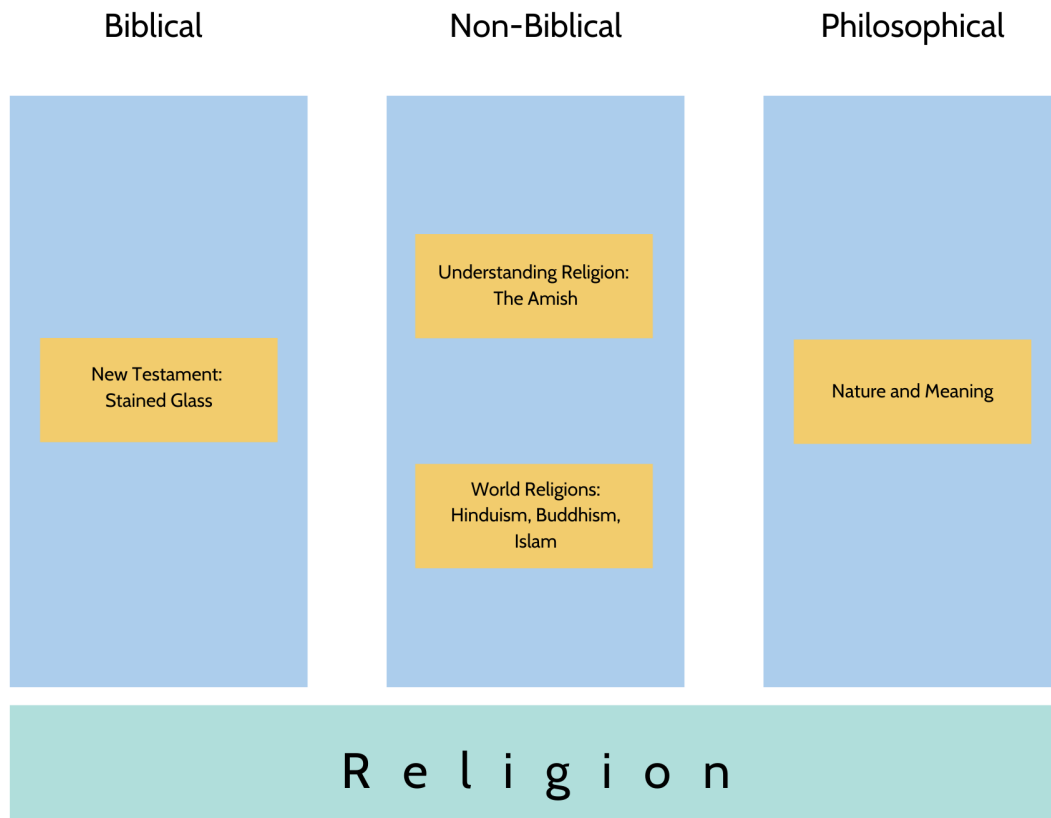
		Fall	Winter	Spring	Term classes are open to all 12th graders and to 11th graders who are taking a yearlong English class concurrently
12th	Advanced Studies in Literature & Composition	Art of Fiction	Contemporary Poetic Theory: Shifting Soundscapes	The Little Magazine	
		Intro to Film Studies	The Art of Fiction	Art Cinema	
		Art of Poetry	Intro to Film Studies	Literature and Language of Sports	
		In Pursuit of the Essay	Introduction to Journalism	Indigenous Peoples	
		Fantasy Literature	Graphic Novels	Beyond Borders	
		Gender, Race, Sexuality, Shakespeare	Existentialism	Post-Apocalyptic Fiction	
		Intro to Professional Criticism	American Plays	Shakespeare and Performance	
11th	Advanced Studies in English Language and Comp.	American Lit: Wanderlust and Identity			
10th	Power, Justice, and Authority				
9th	Introduction to Literary Arts				
English					

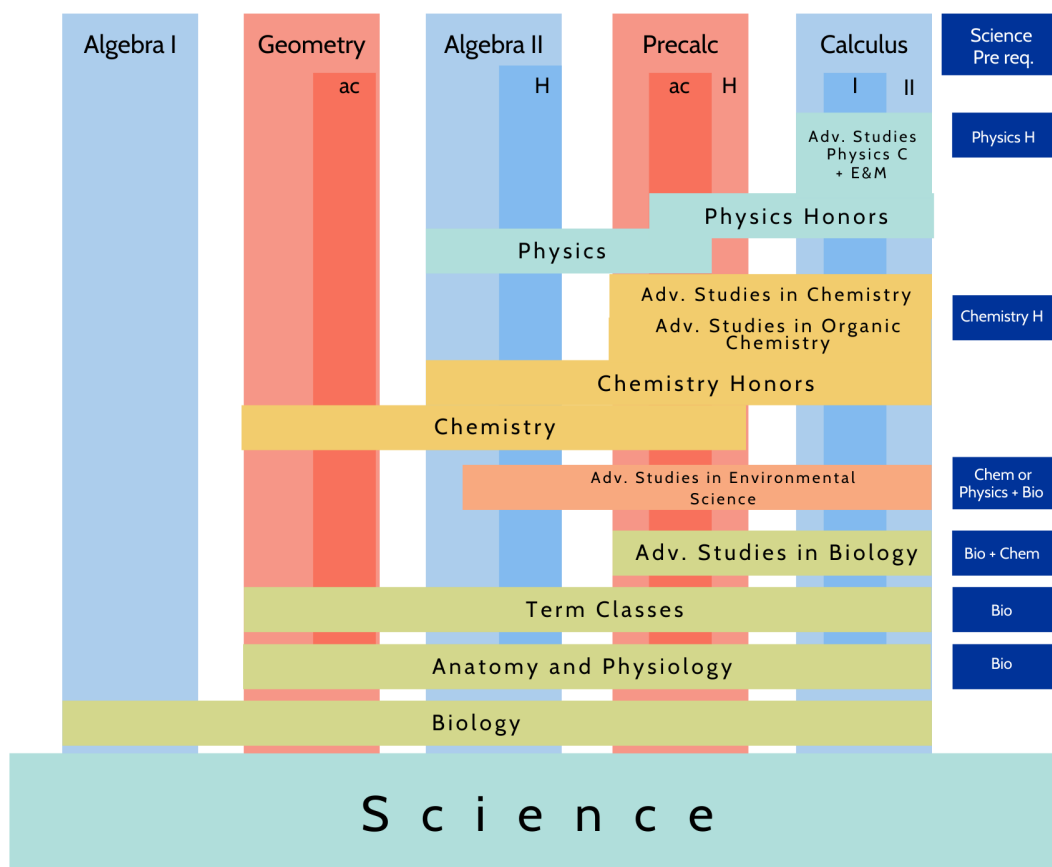






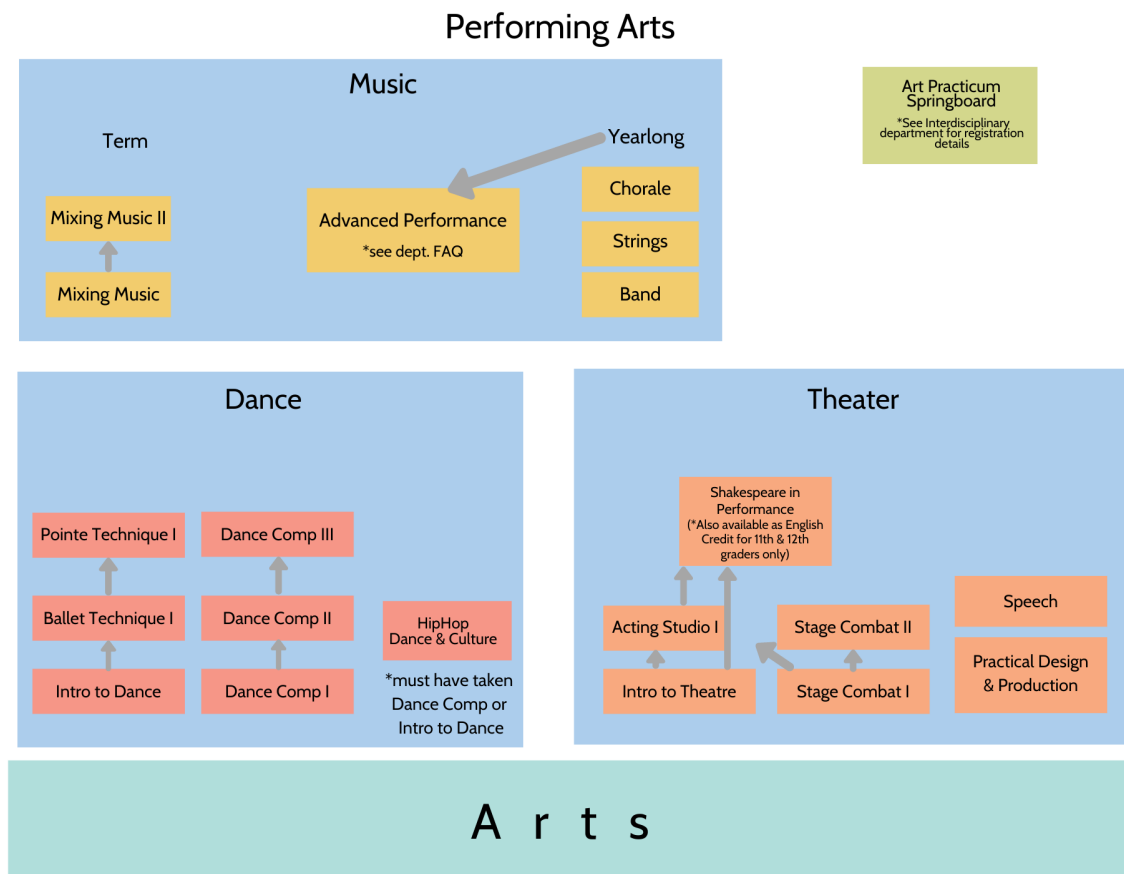




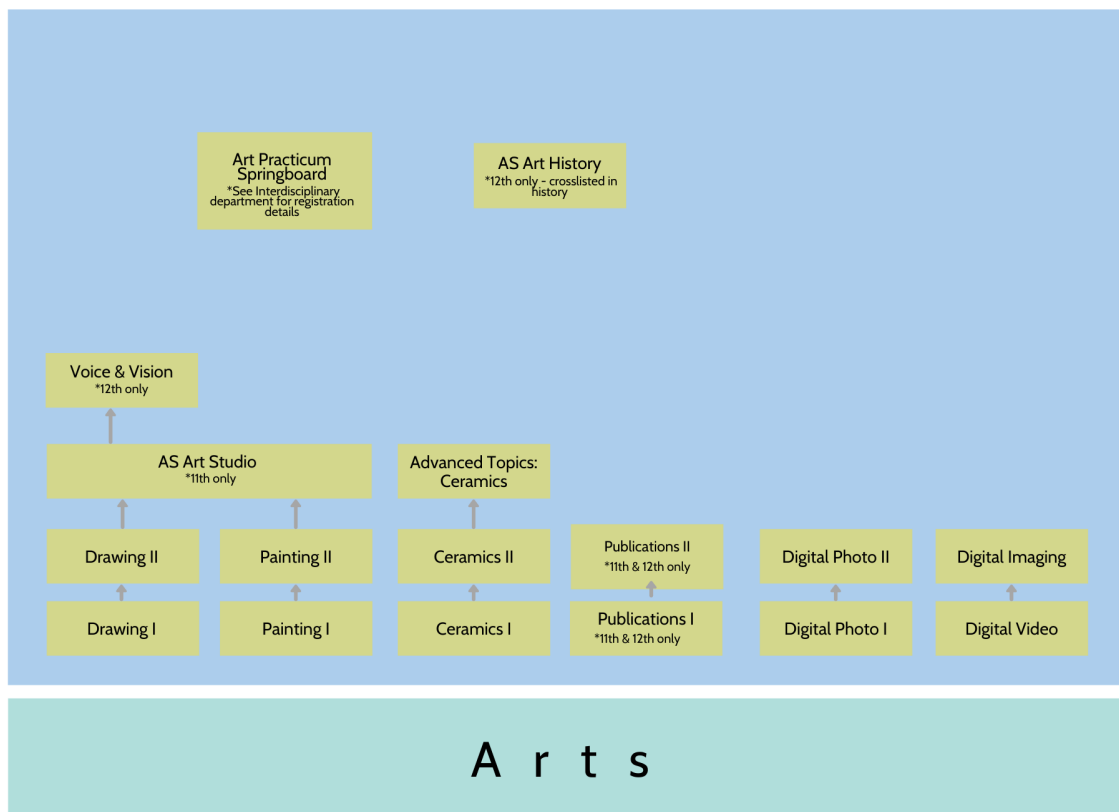


Arts

Course diagram



Visual Arts



Dance

Introduction to Dance

FALL.

Prerequisite: Introduction to Dance or Dance Composition I.

This course will provide students with the opportunity to acquire proficiency in dance regardless of previous training and background. From the athlete looking to improve balance and flexibility to the student with prior knowledge wanting to develop their interest in dance, this course is designed to incorporate all levels of ability.

The content includes application of fundamental principles of swing, jazz, modern, ballet, tap and Hip hop technique. Including barre, center floor, axial center, and locomotor and physiologically sound movement progressions. Class will primarily consist of technique; however, a variety of dance related topics (including the introduction of the history and terminology of these idioms) will be covered in a collaborative group and lecture format.

Hip-Hop Dance & Culture

SPRING.

Prerequisite: None.

Hip-hop provides students with opportunities to acquire knowledge and skills in the history, terminology and basic Hip-hop steps, foundation styles and grooves associated with certain styles of music and specific regions of the U.S. Students will learn to properly investigate and breakdown music (both past and current). Musicality is extremely essential in the performance of Hip-hop dance especially as students advance in their skill and technique. Lastly, students will combine all material involving foundation, different styles, and musicality into a choreographed piece of dance with possibility of performance."

Ballet Technique I

WINTER.

Prerequisite: Introduction to Dance or permission from instructor

Ballet Technique provides students with opportunities to acquire knowledge and skills in basic ballet techniques. The content includes knowledge and application of basic barre warm-ups, center techniques, turns, jumps and knowledge of basic terminology.

Pointe Technique I

FALL.

Back to [Table of Contents](#)

Prerequisite: Introduction to Dance, Ballet Technique I or permission from the instructor

Pointe Technique I provides the opportunity for students to extend the acquisition of knowledge and the development of technique in pointe and provide the opportunity to perform.

The content includes knowledge and application of basic barre warm-ups, center techniques, turns, solo variations and continued knowledge of terminology.

Dance Composition I

WINTER.

Prerequisite: None. Open to all students.

This course provides students the opportunities to learn the fundamentals of choreography and recognize that a dance has a beginning, a middle and an end, and that the form of a dance must be related to its content if it is to be an aesthetic whole. Through experimentation and improvisation, compositional elements are gradually introduced (space, time energy, etc.). Students experiment with the elements of dance to explore personal movement preferences and strengths, and select movements that challenge skills and build on strengths in an original dance study and a collaborative dance. After school rehearsals, special engagements and performances may be required.

Dance Composition II

SPRING.

Prerequisite: Dance Composition I or permission of the instructor.

This course provides students the opportunities to further extend the acquisition of knowledge of techniques of choreography and performance.

The content includes experiences in dance critique, research on periods in dance history, lighting design, costumes and dance choreography for performance. After school rehearsals, special engagements and performances may be required.

Dance Composition III

SPRING.

Prerequisite: Dance Composition II or permission of instructor.

This course will provide students the opportunity to further extend the knowledge of techniques of choreography and performance. Students will express their understanding of choreographic elements (space, time and energy) through the use of both traditional and invented movements.

Group work, including partnering, as well as solo work, is explored.

Back to [Table of Contents](#)

Theatre

Introduction to Theatre

FALL, WINTER.

Prerequisite: None. Open to all students.

Intro to Theatre is an exploration of theatre history and performance styles from Ancient Greece to Modern Naturalism. Students at any experience level will work collaboratively to perform scenes in different styles. Focus will be on clearly telling stories and developing characters through voice and movements. Topics explored will include Greek theatre, Commedia Del'Arte, Melodrama, puppetry, and contemporary scene studies."

Acting Studio 1

SPRING.

Prerequisite: Intro to Theatre, Stage Combat I, or permission of instructor

Open to all students.

Students with previous acting experience OR who have successfully completed Intro to Theatre or Stage Combat will use this class to explore multiple theatrical styles in more depth. Theatre styles that may be covered include physical theatre, devised theatre, contemporary scene study, and classical styles. Students in Acting Studio will form a collaborative Ensemble and will also complete tasks related to technical theatre and art administration in support of their performance work. The classes work on scenes and devised pieces will be showcased as part of the Spring Scenes PGA performance.

Stage Combat

FALL, SPRING.

Prerequisite: none.

Stage Combat is open to any student who would like to learn how to tell a story through SAFE combat mime. Work will include hand-to-hand combat, throws and falls, sword and weapons work, and slapstick comedy.

Students will increase their flexibility, strength, and physical control while also stretching their imaginations and learning about the history of combat and weapons across multiple cultures and through the ages.

Stage Combat II

FALL, SPRING.

Prerequisite: Stage Combat

Students will be given the time and space to more deeply develop skills they learned in Stage Combat I. They will incorporate dialogue into their combat scenes and work with heavier, more realistic weapons.

If the course is taught in conjunction with Stage Combat 1, SC 2 students will have the opportunity to teach new participants (with guidance) and develop their skills in collaboration and leadership.

Practical Design & Production

WINTER.

Prerequisite: None.

In Practical Design and Production students develop basic skills in design, building, and historical research as they relate to creating practical objects.

Materials/techniques include woodworking, sewing, 3D printing etc. This is the first step for students with an interest in theatrical or fashion design and makers spaces.

Speech

FALL, SPRING.

Prerequisite: None. Open to all students.

This class will introduce students to the speaker's basic tasks: clear, full, free vocal communication. Students will be exposed to a wide variety of exercises and techniques, focusing on building skills of articulation, phrasing, rhythm, tempo, concentration, spontaneity, imagination, physicalization, and interpretation. Students will rehearse, perform and evaluate their work and that of their classmates as work progresses. Students will learn skills leading to a well planned oral presentation.

Shakespeare in Performance

SPRING.

A senior elective, this course can also be taken in the 11th grade if taken in addition to a year-long English course. Prerequisites: Acting 1 or completion of a 10th grade English Class.

Shakespeare and other Early Modern playwrights will be studied using the skills and techniques of the actors who were the original audience for the texts. Students will work as a self directed ensemble and advance their skills of text analysis, study of verse vs prose, and development of character using the script as their starting point. Students will also explore the theatre styles that influenced the Early Modern Playwrights and the styles that developed after the Renaissance. These may include Greek Theatre, Commedia Dell'arte, Restoration Theatre, and Melodrama."

Music

Advanced Performance with Chorale

Prerequisites: Concurrent enrollment in Band, Chorale, or Strings and completion of Acting 1 or previous experience in Stony Batter.

Students who take Advanced Performance are currently participating in Band, String, or Chorale Ensembles but also wish to continue their training in acting.

Advanced Performance is a multi-discipline course for upperclassmen.

This course allows a student to participate in their yearlong music ensemble and advance their theatre/musical theatre technique without adding an additional class to their schedules. This course is particularly helpful to those considering theatre/musical theatre as a future area of study. Students accepted into Advanced Performance will substitute this class for Band, Chorale, or Strings twice a week. This course earns 2/3 credit per term.

Advanced Performance with Band

Prerequisites: Concurrent enrollment in Band, Chorale, or Strings and completion of Acting 1 or previous experience in Stony Batter.

Students who take Advanced Performance are currently participating in Band, String, or Chorale Ensembles but also wish to continue their training in acting.

Advanced Performance is a multi-discipline course for upperclassmen.

This course allows a student to participate in their yearlong music ensemble and advance their theatre/musical theatre technique without adding an additional class to their schedules. This course is particularly helpful to those considering theatre/musical theatre as a future area of study. Students accepted into Advanced Performance will substitute this class for Band, Chorale, or Strings twice a week. This course earns 2/3 credit per term.

Band Performance

Prerequisites: Concurrent enrollment in Band, Chorale, or Strings; and completion of Acting 1 or previous experience in Stony Batter.

Students who take Advanced Performance are currently participating in Band, String, or Chorale Ensembles but also wish to continue their training in acting.

Advanced Performance is a multi-discipline course for upperclassmen.

This course allows a student to participate in their yearlong music ensemble and advance their theatre/musical theatre technique without adding an additional class to their schedules. This course is particularly helpful to those considering theatre/musical theatre as a future area of study. Students accepted into Advanced Performance will substitute this class for Band, Chorale, or Strings twice a week. This course earns 2/3 credit per term.

Choral Performance

Prerequisite: None.

This course is designed for singers - sopranos, altos, tenors, and basses. Students will practice performance skills both individually and as an ensemble. Public performances will be an important part of the work for this course. The course will encourage an understanding of the aesthetics of music and will also teach basic music theory and sight reading. Students will be enrolled into this course upon recommendation of the music faculty.

This course earns 2/3 credit per term.

String Performance

Prerequisite: Permission of the department.

This course is designed for string players - violins, violas, cellos, and string bass players. Students will practice performance skills both individually and as an ensemble. Public performances will be an important part of the work for this course. The course will encourage an understanding of the aesthetics of music and will also teach basic music theory and sight reading. Students will be enrolled into this course upon recommendation of the music faculty.

This course earns 2/3 credit per term.

Mixing Music in the Digital Age

FALL, WINTER, SPRING.

Prerequisite: None. Open to all students.

This course introduces students to the world of music production using the contemporary music software GarageBand. Mixing Music provides a project-based, hands-on experience in loop-based music production, MIDI basics, audio recording, digital signal processing and effects, live and

post-recording mixing, and digital mastering. Students do not need to have a music performance or music-reading background.

Mixing Music in the Digital Age II

SPRING.

Prerequisite: Mixing Music I and permission of the department. Students with past experience with DAWs may qualify based on a project they submit.

This course continues work completed in the first level of Mixing Music in the Digital Age. We move from a basic DAW (digital audio workstation) in Garageband to a professional workstation in Logic Pro X. More advanced compositional techniques and more advanced music theory will be explored, building on what was learned in Level I. Additional emphasis will be placed on techniques in mixing and mastering tracks.

Visual Arts

Digital Photography

FALL.

Prerequisite: None. Open to all students.

This class provides students the opportunity to study and explore digital photography and learn techniques used in a digital darkroom. Learners will learn how to properly use a Digital Single Lens Reflex camera. Learners will explore and learn manual settings, camera optics and focal lengths, lighting, perspective and exposure. The second half of the course will focus on processing the images using current digital darkroom techniques. Learners will learn to process images using Adobe Lightroom and Adobe Photoshop. Learners will develop a portfolio that demonstrates technical, design and conceptual skills. Learners will have the opportunity to explore both natural and studio light scenarios. They will develop their unique creative voice using a variety design techniques. They will create commercial and fine art while building the foundations of the principles and elements of art and design.

Student capacity: 13

Digital Photography II

SPRING.

Prerequisite: Digital Photography or permission of the department.

This class provides students the opportunity to continue studying and exploring digital photography. They will build upon their foundation learned in Digital Photography I and learn advanced techniques

used in-camera, with studio lighting and a digital darkroom. Students will use a Digital Single Lens Reflex camera to create fine art and commercial photography. Students will explore and learn advanced techniques in shooting, camera optics, and focal lengths, lighting, perspective, and exposure. The course will focus heavily on conceptual work and visual literacy. Students will learn to process images using Adobe Lightroom and Adobe Photoshop.

Students will develop a portfolio that demonstrates the technical, design and conceptual skills. Students will have the opportunity to explore natural light, studio light, and scenarios that require the photographer to balance both. They will develop their artistic eye that uses the medium to control the creative voice and concept of the work. The course will focus on learning and building functional applications of the principles and elements of design.

Digital Video Art

WINTER.

Prerequisite: None. Open to all students.

This course is an introduction to the principles of film media, with an emphasis on digital video capture and editing. Learners combine audio, video technology and 2D graphics of filmmaking. Learners will explore camera, audio and editing techniques that build the story and mood of a film or documentary. Learners will spend time analyzing films from a filmmakers perspective and apply this to their own work.

Digital Imaging

SPRING.

Prerequisite: None. Open to all students.

Students will learn and explore Adobe Photoshop as a digital imaging and digital paint tool. Students will create artwork using the current technology within raster or pixel graphics using digital cameras, scanners, Macintosh Computers, and Wacom Tablets. They will use Adobe Photoshop to create composite images, paint digitally, and design layouts. The students will explore color theory, composition, conceptual art, and typography. Students will develop a portfolio that demonstrates the technical, design and conceptual skills. They will develop their artistic eye using various design techniques like the Rule of Thirds and other grid systems. They will create commercial and fine art while building the foundations of the principles and elements of art and design.

Publications - Design, and Production in Modern Publishing I

WINTER, SPRING.

Prerequisite: None - Open to 11th & 12th grade only.

Publications will support learners in learning modern publication techniques and methodology. Learners will develop skills in asset creation, asset printing preparation, layout, design, proofing, interviewing, group work, and modern printing and publishing techniques. Learners will be working on

a combination of individual and collaborative projects that would provide learners novel situations to practice their skills for depth and retention for work in which they are personally invested."

Publications - Design, and Production in Modern Publishing II "SPRING.

Prerequisite: Publications - Design, and Production in Modern Publishing I

Open to 11th & 12th grade only.

Building on the worked learned in the Winter term, Publications II will support learners in learning modern publication techniques and methodology. Learners will develop skills in asset creation, asset printing preparation, layout, design, proofing, interviewing, group work, and modern printing and publishing techniques. Learners will be working on a combination of individual and collaborative projects that would provide learners novel situations to practice their skills for depth and retention for work in which they are personally invested.

Drawing I

FALL, WINTER, SPRING.

Prerequisite: None. Open to all students.

This course introduces students to the Elements of Design: line, shape, value, form, space, texture and color. These Elements are emphasized and rendered through direct observation and exploration manipulating various dry media such as pencil, charcoal, conte crayon and marker. Each lesson and project progressively builds upon the next culminating in a Self-portrait built upon the proportions and scale of the human skull. These

projects allow the student artist to formulate conversation with the knowledge to describe, analyze, and interpret ART in and out of the studio setting.

Drawing II

WINTER.

Prerequisite: Drawing I.

Students build on techniques learned in Drawing 1 incorporating Elements of Art with Principals of Design. The students begin working from observation to employ the Principals of Design and move from representation to deconstruction and essence building their comfort in crafting more conceptual themes. Creative curiosity is nurtured as students develop visual statements evoking emotion and meaning beyond representation.

Materials include but are not limited to pencil, pen, charcoal, conte crayon, pastel and ink wash.

Painting I

FALL, WINTER, SPRING.

Prerequisite: None. Open to all students.

This course introduces the student artist to acrylic paint and its formal application using the Elements of Design: line, shape, value, form, space, texture and color. Student artists will learn how to talk about their work and the work of others through Critical Analysis as they describe, analyze and interpret ART. Color theory, composition, and life rendering will be stressed as the student artist becomes more adept in rendering to then culminate in a personal choice subject adhering to the Artistic Process.

Painting II

SPRING.

Prerequisite: Painting I.

In this course students build on the techniques learned in Painting 1 incorporating Elements of Art with Principals of Design working in traditional and non-traditional application of the acrylic medium, watercolor, oil, and mixed media. The students work primarily from observation to explore composition, perspective, foreshortening and shading while diving deeper into the manipulation of the medium and will build a custom substrate using stretcher bars and canvas for their final painting. Creative curiosity is nurtured as students develop visual statements from conceptual themes evoking emotion and meaning.

Advanced Studies: Studio Arts

Prerequisites: Second level of a Visual Art class, a completed application, & department approval.
For Upper Middlers only.

Advanced Studio Art values the students' creative processes as well as their final artwork. Students will develop techniques in a variety of media, and then conduct thoughtful inquiry into their own thinking and art making processes' recording this learning in written and visual formats in their sketchbooks. Students are expected to be independently motivated as they research artists and art works throughout history and across cultures. Connecting their research to their own work, students will create a portfolio of artwork that expresses their own personal voice within a cultural context. In addition to learning how to appreciate and evaluate their own work and that of others, students will be required to participate in frequent assessment of their sketchbooks and work through critique individually with the instructor and in groups with the other members of the class.

Voice and Vision

FALL.

Prerequisites:

- Graduation requirements for Fine Arts must be met prior to enrolling in this class.
- Students must have taken previous classes in the visual arts in which a body of work has already begun.
- Departmental approval required.

This is a course for seniors.

Back to [Table of Contents](#)

Through a variety of media, this term course enables student artists in twelfth grade to more deeply explore and express their visual statements, further weaving investigation, technique, and personal experience with their emerging personal aesthetic—resulting in a unique voice and vision.

Portfolios created may be used as primary or supplemental to the college application process flexing the student's depth of creative acumen. To complete their study in a culminating event, each student will showcase a portion of their body of work in the Cofrin Gallery during the Spring's Senior Art Exhibit.

Ceramics I

FALL, WINTER, SPRING.

Prerequisite: None.

Open to all students.

This course is an introduction to the fundamental methods and techniques of ceramics. Students will work four weeks at the wheel and four weeks hand-building. The assignments address context and content issues as the students create sculptural and utilitarian objects. Glazing the objects with an informed understanding will be developed. The course also addresses the nature of art as it relates to the specific object.

Ceramics II

FALL, WINTER.

Prerequisite: Ceramics I.

Intermediate ceramic principles and techniques will be taught through the use of hand-built and/ or wheel-thrown objects (students preference).

The elements of art, art historical reference, sources, and personal expression will be addressed. This course is intended to give the student an understanding of concepts common to all three-dimensional art forms. Art historical references will be researched to support the students personal expression.

Advanced Topics in Ceramics

SPRING.

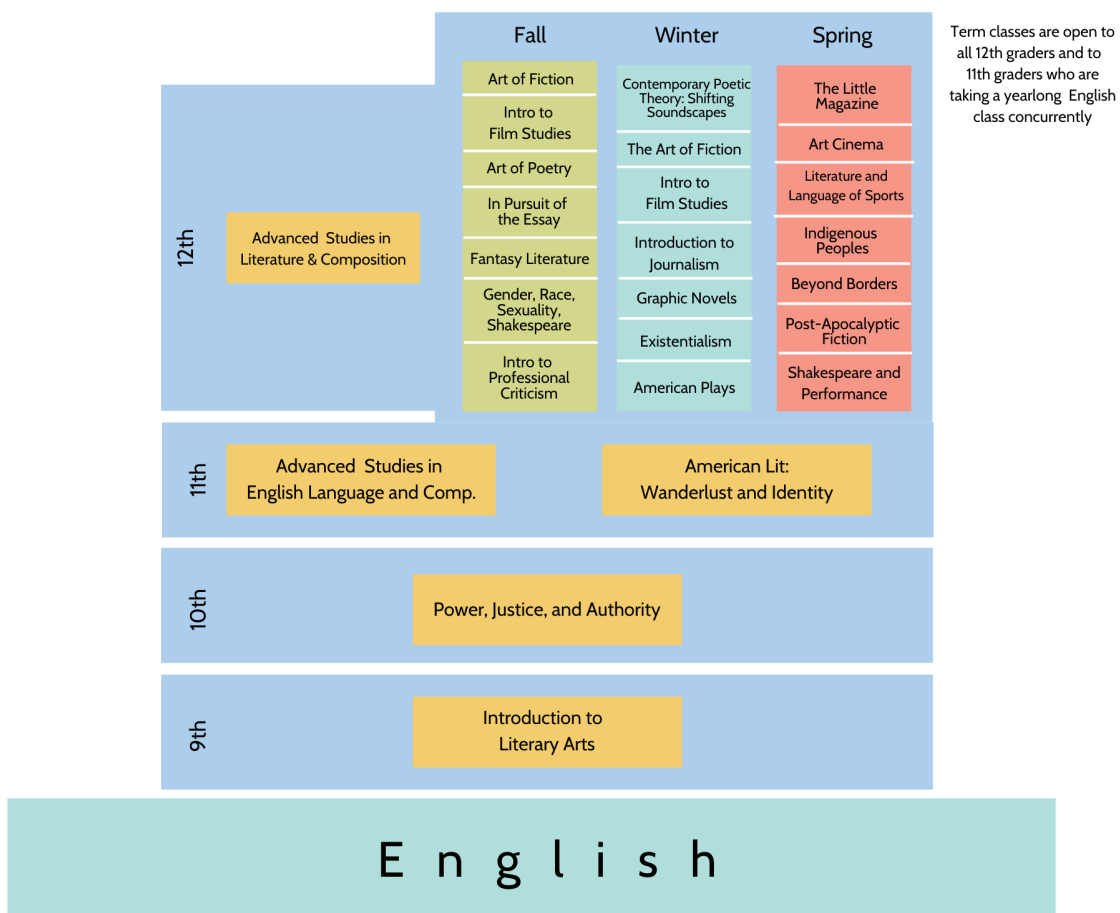
Prerequisite: Ceramics II or permission of the instructor.

Advanced ceramic principles, methods, and techniques will be taught through the use of hand-built and/ or wheel-thrown objects (students preference).

Student will choose their course of independent study with the guidance of the instructor. The elements of art, art historical reference, sources, and personal expression will be addressed even further. Design and composition aesthetics are paramount in teaching a student how to communicate their message using a ceramic object."

English

Course diagram



9th grade

Introduction to Literary Arts

Prerequisite: None

Standard Course for ninth graders.

This course is devoted to the study of composition, literature, and the necessary foundational skills of grammar and vocabulary. Students will study a range of texts including a play, poetry, and a common text. A cornerstone of the ninth grade English course is reading ""choice books"" - texts chosen by students from a range of options provided by the instructors.

10th grade

Power, Justice and Authority

Prerequisite: None

Standard course for tenth graders.

Themes of power, justice, and authority are inherent to humankind and, in turn, permeate literature. Through the works studied in this course, students will explore what it means to seek and to wield power, the recognition, use, and abuse of authority, the perspectives of those who have, or perceive to have, neither, and the varying definitions of justice and injustice. Students will continue to hone their composition and critical-thinking skills through sustained study and practice of the writing process and the expository essay. Students will apply the principles of classic, positive-case argumentation to formulate a clear, concise principal assertion that is supported by ample, accurate evidence and enhanced by thoughtful, original, confident commentary. Particular emphasis will be placed on the careful evaluation and crediting of sources, the ethics of sound research and scholarship, and the importance of effective hooks, topic sentences, and transitions. Students will also be challenged to demonstrate a heightened awareness of audience, the refinement of a unique and compelling personal voice, and an increasing mastery of diction and syntax. Increasing vocabulary will also be a priority.

Texts include a variety of short stories, poems, plays, and novels. Traditionally, works have included: Fahrenheit 451, Othello, 1984, Catcher in the Rye, Things Fall Apart, and the possibility of a "choice book" selected by students.

11th grade

Advanced Studies: Language, Rhetoric, and Composition

Prerequisites: 60 on verbal PSAT or 600 on SAT critical reading. An 85 or better (unweighted) in Power/Justice H or 90 or better in Power/Justice at Mercersburg.

Evidence of strong achievement in English.

Department and teacher approval is required.

Open principally to eleventh graders who have demonstrated the ability to do very rigorous work in English. Must maintain an 85 average (unweighted) in this course or placement is subject to review.

This course is aligned with the AP English Language and Composition curriculum. AS: Language, Rhetoric, and Composition is primarily a course in effective argument writing, analysis of rhetorical features of a text (critical reading), and synthesis of sources, with an emphasis on non-fiction. It is designed for the student with a strong command of composition and grammar skills.

Wanderlust and Identity in American Literature

Prerequisites: None.

Standard course for 11th graders.

Wanderlust and Identity in American Literature examines how the wide open and diverse lands of America left an indelible mark on those living here, inspiring them to travel and confront their own identity. The variety of experiences—from the wilds of Alaska to the austerity of New England—play a role in shaping how Americans view the world and themselves. Through novels, short stories, and poems, we will focus our attention on the construction of the American Identity and how America's diversity inspires different voices to expand on the meaning of the American experience."

12th grade

Advanced Studies: Literature and Composition

Prerequisites: An 85 or better (unweighted) in AS English Language, or 90 or better in Wanderlust and Identity at Mercersburg; and evidence of strong achievement in English. Teacher's approval is required. Departmental permission required.

Must maintain an 85 average (unweighted) in this course or placement is subject to review.

In Advanced Studies in Literature and Composition, students learn to think critically and write cogently about the texts with which they engage. They also learn to expand their notions of what a text is. Certainly a text is a novel, play, or poem, but a text can also be a groundbreaking symphony, a masterpiece of cinema, a riveting speech, a landmark jazz recording, or even a TV commercial. Consequently, students discover that, like reading, listening and viewing need not be passive activities. The texts in the course, while they may vary from year to year, span from the classical to the contemporary and offer an intentional study of the evolution of global perspectives and how the arts reflect such shifts.

The texts in the course, while they may vary, span from the classical to the contemporary, offering an intentional study of the evolution of global perspectives, the ethical dimension of life, and how the works reflect the human condition.

Term courses

Senior electives, these courses can also be taken in the 11th grade if taken in addition to a year-long English course. Term courses are tagged to indicate content focus for students to build a specialized track of English study, if desired.

Gender, Race, and Sexuality in Shakespeare

FALL.

TAG: Literature through a Critical Lens

Students often consider the concepts/constructs of gender, race, and sexuality as contemporary notions, when indeed they are as old as humanity itself. Who better to help students come to a greater understanding of these issues than the Bard? Students will read two plays in their entirety, one tragedy and one comedy, which have notions of gender, race, and sexuality at their core. To augment and deepen our study, scenes from several other plays will also be considered. We will also discuss selected sonnets, especially those concerning the “Fair Youth” and the “Dark Lady”. Additionally, the course will employ current multimedia resources in order to allow students not only to understand gender, race, and sexuality in contemporary society but also to form their own definitions of these concepts/constructs.

Fantasy Literature

FALL.

TAG: Genre Study: Fiction

This English term course will introduce students to the works of some of the best fantasy writers of the last half-century, focusing most specifically on those stories that involve either the intrusion of fantastic forces into the modern world, or on protagonists who unexpectedly find themselves drawn to or dropped into fantasy realms. The reading list for the course will boast a who's who of Hugo, Nebula, and World Fantasy Award winners. Students will also view an Academy Award-winning fantasy film or two, critically speak and write about these works, and pen one or more short fantasy pieces of their own.

Introduction to Film Studies

FALL, WINTER.

TAG: Film Studies

With a focus on introductory concepts of film, this course serves as a foundation for advanced topics explored in the Art Cinema course. For over a century, film has developed as an extension of literature, theater, and art. As literature presents complex ideas to an audience on paper, film echoes this through the medium of celluloid. Literature uses syntax, diction, dialect, and numerous literary tools to translate meaning to an audience. Film has an arsenal of tools from the literature, theater and art worlds at its disposal: lighting, music, framing, lens type, editing, film stock, sound, acting, and many more are all used to create meaning. Understanding how these tools are used gives students a vocabulary for visual literacy, and allows them to gain meaning from a film as they would from literature, theater, or art. With forms of media permeating our lives, our ways of interpreting the world are deepened by an understanding of their meaning and place.

Through works in this course, students will learn how to analyze films in a similar manner to literature, theater, or art. Additionally, students will study landmark and groundbreaking films, the history of film, genres, and film-making to learn how to dissect story for a deeper understanding of the work. One full feature length film will be taught per week, and students will be required to participate in class discussion, complete writing and reading assignments, take quizzes and tests, and write papers.

The Art of Poetry

FALL.

TAG: Creative Writing: Poetry

With a focus on introductory concepts of poetry, this course serves as a foundation for advanced topics explored in the Contemporary Poetic Theory: Shifting Soundscapes course. Students will discover the "Art of Poetry" by reading, writing, and sharing it. As they examine a diversity of contemporary poems and poets including the Poet Laureates, students will experiment with line, stanza, form, figurative language, rhythm, and sound. This course encourages poem generation, poem iteration guided by workshop, public speaking through participation in community events, and submission for publication.

Back to [Table of Contents](#)

The Art of Fiction

FALL, WINTER.

TAG: Creative Writing: Fiction

By focusing on plot, setting and character, this course will offer the student practical experience in the creative process of crafting short stories beginning with dialogue and scene painting to plotting and fully-drafted stories. It will focus on the construction of short fiction from foundations of voice, tone, diction and syntax, and include emphasis on plot, dialogue, description, pacing and sound. It will review various conventions of the short story and methods of work shopping for revision.

In Pursuit of the Essay

FALL.

TAG: Critical Writing

This term class focuses on a variety of readings, literary genres and writing techniques. The selected readings, both novels and short stories, are used to inspire a variety of forms of student writings that focus on clarity, diction, organization, creativity, and the development of a personal writing voice. These readings encourage students to connect with their world, to examine contemporary ideas and issues, and to address philosophical questions. Studied texts raise questions not only related to the story, but also to the student's assumptions and understanding of the way the world works. Students will be required to write appropriately about emerging themes, ideas and issues in a variety of formats including the personal essay, the expository essay, and the persuasive essay. This class will probe beyond the expository essay writing style to focus on tone, creativity, and alternate approaches to creating voice in their writing. Selected stories have included *American Hunger* by Richard Wright, *The Weak Shall Inherit the Gym* by Rick Reilly, and *Fat* by Raymond Cover. Current texts: Kilter: 55 Fictions and *The Fault in Our Stars*.

American Plays

WINTER.

TAG: Genre Study: Plays

This course will introduce students to some of the greatest plays of the modern American theatre. The class will be taught using interdisciplinary, project-based methods that interact with the texts not only as dramatic literature, but as works of art written to be performed. In addition to reading, discussing, analyzing, and writing about these works, students may choose to prepare a scene for in-class performance in place of taking a written final exam. The class will also make a trip to see a

professional production of one of the plays, playwrights, or topics studied. Texts include *All My Sons*, *A Raisin in the Sun*, *Lost In Yonkers*, *Proof*, *Other Desert Cities*, and *August: Osage County*.

Contemporary Poetic Theory: Shifting Soundscapes

WINTER.

TAG: Creative Writing: Poetry

This course serves as the next level of poetry study after *The Art of Poetry* but can be taken independent of that course.

Just how does one go about writing an original poem? How about song lyrics? Spoken word? It's time we explored these opportunities!

This course is both analytical and creative, and will offer students an open and earnest exploration of the craft of language that will become poetry, song lyrics, spoken word, or something else...

It is largely a short-form poetry course, but with emphasis on other creative avenues and possibilities available to the 21st century artist.

We will read poems, listen to spoken word, share music lyrics, and most importantly, build some of our own.

Students will emerge with a stronger understanding and higher proficiency with poetic techniques, developments in poetry from the twentieth century to the present, and a portfolio with a combination of written analyses of other works and original creations.

Graphic Novels

WINTER.

TAG: Genre Study: Fiction

This course will introduce students to some of the most mature and compelling examples of the literary-visual hybrid popularly known as 'comics.' Students will not only deliberate upon the themes and topics explored in the course's texts, but will also be asked to apply critical-thinking skills to complete multi-disciplinary projects that include researching historical and cultural contexts, composing literary analyses, and collaborating on original graphic literature pieces, either by illustrating the work themselves or through the use of technology. *Graphic Novels* is designed for students who enjoy sophisticated stories, seek to improve their visual literacy, and wish to explore the extent to which this genre allows us to decode language, interpret art, and understand our world. Texts include *Understanding Comics*, *American Born Chinese*, *This One Summer*, *The Complete Maus*, and *Watchmen*.

Back to [Table of Contents](#)

Existentialism in Literature

WINTER.

TAG: Genre Study: Philosophy

Though today considered a major philosophical movement, Existentialism began predominately as a literary movement. Following the rise of modernism and riding on the heels of the Great War, existentialist writers explored questions of meaning and order in human existence. Concerned with the isolation and alienation they observed in the wake of modernization and urbanization, existentialists brought renewed energy to the puzzle of individual identity and the meaning of the human self. War and poverty fueled doubt in the existence, benevolence or omnipotence of God. This challenge to Providence opened the door to the threats of chaos, absurdity and, ultimately, meaninglessness.

Students in this course will read works of drama and fiction to develop an understanding of the discourse of existentialism. By the end of the term, students will understand both the philosophical basis of existentialism and the challenge it presents to traditional religious worldviews.

Introduction to Journalism

WINTER.

TAG: Critical Writing

In this course, the class will investigate the way news is defined and reported as well as how news organizations function. The focus will be on how to write effective news, feature, editorial and sports articles. Students will learn how to develop story ideas, how to gather information and how to write clearly and meaningfully. Students will be encouraged to identify and cultivate their own area of interest, whether it is news writing, magazine writing, or another area of writing to convey information and/or entertain. Students are encouraged to develop their own personal style of writing. Both lecture and discussion of theory will be applied.

Shakespeare and Performance

SPRING.

TAG: Genre Study: Plays

Shakespeare and other Early Modern playwrights will be studied using the skills and techniques of the actors who were the original audience for the texts. Students will work as a self directed ensemble and advance their skills of text analysis, study of verse vs prose, and development of character using the script as their starting point. Students will also explore the theatre styles that influenced the Early Modern Playwrights and the styles that developed after the Renaissance. These may include Greek Theatre, Commedia Dell'arte, Restoration Theatre, and Melodrama.

Back to [Table of Contents](#)

Beyond Borders

SPRING.

TAG: Critical Writing

Why do we wander? What is it about distant landscapes and cultures that draws us to them? Why are harrowing journeys often the most rewarding? When we find ourselves in an exotic land, what is it then that fills our senses, that conjures memories well into the future? That transforms us from wayfarer to storyteller? In *Beyond Borders*, we will explore the nomadic impulse, the tales spun from some of the earliest 'great journeys,' and the evolution of the modern genre. We will read both travel essays and longer works, like Peter Matthiessen's *The Snow Leopard*. And in doing so, we will address some of the most profound questions ever posed about human restlessness.

Post-Apocalyptic Fiction

SPRING.

TAG: Genre Study: Fiction

Since well before the atomic age, authors have explored the notion of the end of modern civilization, ravaged by anything ranging from a global pandemic to cataclysmic natural events. Whether due to the long-term effects of living in a post-9/11 world, or our growing sense of political and economical uncertainty, this literature has permeated our culture, becoming increasingly popular over the past decade. This English term course will introduce students to characters struggling to retain their humanity amidst the chaos and corruption of post-apocalyptic worlds. Our thematic investigations will consider good and evil, the moral costs of survival, redemption and salvation, loneliness and longing, hope in the face of despair, governmental collapse, and gender.

Art Cinema

SPRING.

TAG: Film Studies

This course serves as the next level of film study after Introduction to Film Studies but can be taken independent of that course. The term "art cinema" is one of the most familiar in film studies, marking out simultaneously specific filmmakers, specific films, specific kinds of cinemas, and, for some writers, specific kinds of audiences. Art cinema is often defined as an artistic or experimental work expressing symbolic meaning through the medium of film. It is ambiguous, aesthetically rich, and complex. This class will discuss a number of art films from around the world, though its focus will be primarily on European cinema.

Throughout this course, we will revisit the very idea of art cinema and work towards creating our own definition of what art cinema actually is and how it has changed throughout the 20th century. We will watch a number of films by so-called auteurs and consider what art cinema's relationship is to our larger, global culture. On average, students will watch about one film a week, and the course will have a number of readings about film theory and criticism.

Indigenous Peoples

SPRING.

TAG: Literature through a Critical Lens

In this process-based class, students will explore the Massawomeck people and the land on which Mercersburg Academy is situated. Over the course of the term, the class will attempt to create a capsule experience that the school can take part in. Some potential examples could include:

- Construction of an indigenous dwelling
- Production of a meal for the school community using indigenous methods
- Sharing indigenous land practices with the buildings and grounds department

This course explores the school's strategic choice of : "Maximize the impact of place and time in order to connect learning to our history, our community, and the environment we steward." We hope to take students to various sites in the area to further their exploration of Massawomeck lands.

Through looking at the environmental stewardship practiced by the indigenous peoples, students will gain an understanding of humans' role in taking care of the environment. This part of the course will offer opportunities to work with Green Team.

The course will make use of indigenous methods of learning, namely the oral and hands-on traditions. For this reason, we will not have a course text as such but we propose having a materials budget.

This course will expand the BIPOC-focused course offerings, consistent with the school's recent focus on DEIJ issues. By focusing on the indigenous part of BIPOC identities, students will be forced to confront their implicit biases about indigenous peoples. Navigating the courageous conversations around the impact of settler colonialism will give students valuable skills to go into their own communities and confront injustice.

Because it is likely the majority of the students will not be Indigenous the course offers valuable experience in navigating cultural recognition without appropriation.

Introduction to Professional Criticism

FALL.

Back to [Table of Contents](#)

TAG: Criticism

In this course we will read, discuss, and compose literary, dramatic, song, film, culinary, and product reviews, to name a few. Soundbite culture seems to have found a holding pattern, so in 200-800 words, we should find a way to inject careful and objective observation, analysis, and style into our writing.

Be prepared to develop the instincts of a critical reviewer, establishing your own criteria for each medium we investigate.

Read samples of product reviews by professionals, amateurs, and of course, user reviews...

So just what types of material will catalyze our evaluations? We will read or experience:

- Short fiction
- Going on location to watch a live performance
- Television episodes
- Watching an entire film from a major studio
- A full studio album
- Dozens of individual songs from a ton of different genres
- Going on location to share a meal at a successful independently owned restaurant
- more

Students will all emerge with sharper writing skills, a portfolio of original reviews, and a wider range of appreciation for art and culture.

The Little Magazines: Editing and Publishing

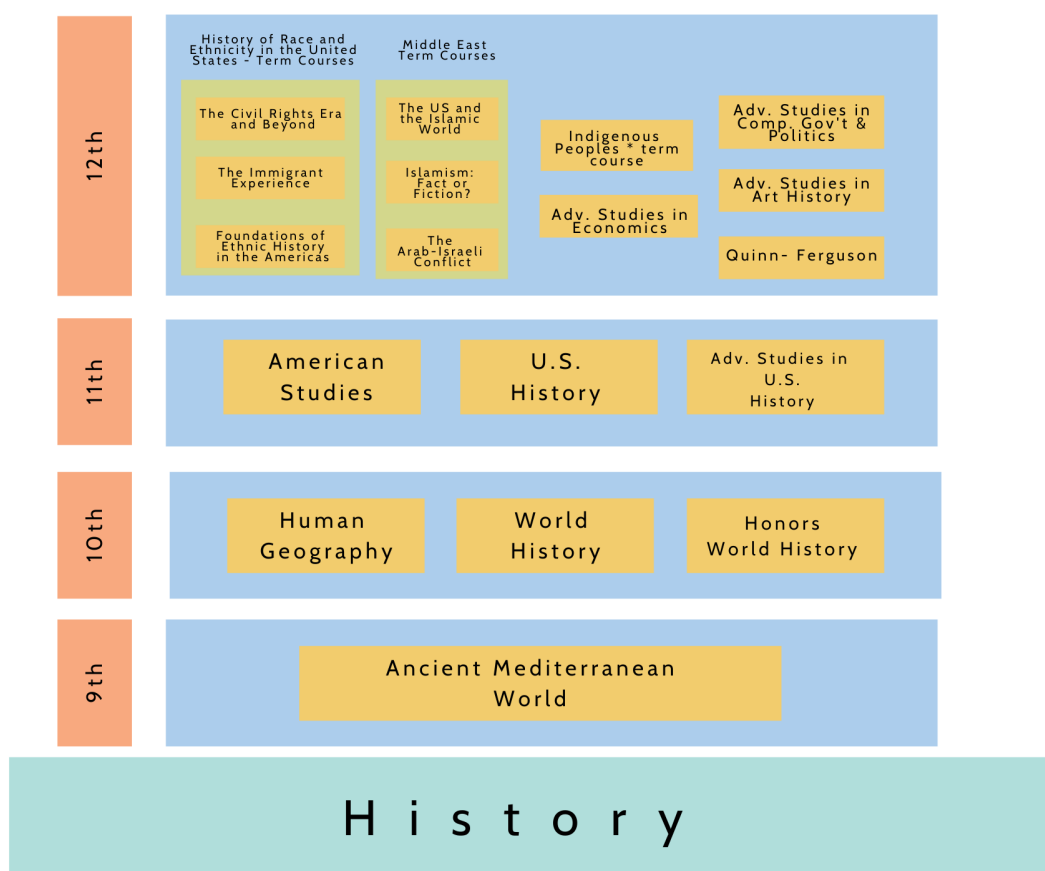
SPRING.

TAG: Editing & Publishing

This course introduces students to a range of literary journals and magazines being published in the U.S. and throughout the world, both online and in print. Students will learn what editing and publishing look like at the collegiate and professional levels, and they will also learn what is required to produce a literary journal at multiple times throughout the year. During the course, students will also meet and share interviews with editors working at literary journals today. In addition, students will have the opportunity to review submissions received by prominent literary journals in the U.S. This course will be divided in the following way: the first half of the course will focus on the historical and contemporary landscapes of literary journals; the second half will emphasize editorial work and will culminate in students' conception and design of their own literary magazine.

History

Course diagram



Course Descriptions

Ancient Mediterranean World

Prerequisite: None.

Required for ninth graders.

This introductory history course familiarizes students with a worldview that incorporates an understanding of the roots of Western civilization and the adoption of a global perspective. Students grapple with fundamental issues of world history and learn how to think comparatively about the past and to recognize large-scale patterns.

Human Geography

Prerequisite: Open to all 10th graders and to 11th and 12th grade who have been approved by the department.

This course examines the complicated relationship between people and the land on which they live. The course utilizes geographic processes to understand how the environment affects people and, in turn, how people change their surroundings. The course is based on a seminar approach with intense writing assignments so that students can explore issues more completely. The course closely follows current events and students are required to keep up with the news throughout the school year. Through relevant case studies and independent projects, students will gain a deep understanding of the modern world in which they live. In the fall term students spend the first five weeks learning geographic terms and gaining skills in geographic technologies such as GIS and Google Earth. Students are required to learn the locations of countries, US states and important geographic features during this first unit. The fall term finishes with an examination of the issues surrounding population changes and migration. During the winter term students learn about food, shelter and language in an effort to understand how these factors reflect geographic issues. The term ends by looking at the complex topics of religion and ethnicity. The spring term focuses on political, economic and environmental topics ranging from micro-loans to global warming. As a culminating project, students are required to design and produce a research essay based on an issue that they found to be compelling during the year.

World History

Prerequisite: None.

World History builds on the foundations of Ancient History established in the 9th grade and brings the study of history into the modern era. Beginning in the Middle Ages, World History examines the interconnectedness of human development over the past 1500 years. Political events provide a core for the study of history in this course, but social, intellectual, and cultural movements are also examined to give students a sense of how ideas develop and spread across the planet. A major focus

of the course is showing how modern human civilizations have always had important interactions and impacts on one another, and that this process has accelerated in recent centuries. Rather than study different regions and nations in isolation, World History attempts to weave these stories together into a global narrative.

AS: World History

Prerequisite: permission of the department.

This course is for 10th grade students who have distinguished themselves in history and whose general profile demonstrates their capability to handle a more complex and demanding syllabus.

Honors World History requires a large volume of reading, both in the textbook and primary sources, and a significant amount of in-class writing as well. Students who are ready to challenge themselves and explore the interconnectedness of mankind will do well in the course.

A major emphasis of Honors World History is developing the skill to make connections between human cultures and across various time periods. Students must fully engage with the readings and the class discussions in order to participate in the process of following the progress of mankind. The course is organized around a limited number of key concepts instead of a perceived list of facts, events, and dates makes teaching each historical period more manageable. The three to four key concepts per period define what is most essential to know about each period based upon the most current historical research in world history. This approach enables students to spend less time on factual recall, more time on learning essential concepts, and helps them develop historical thinking skills necessary to explore the broad trends and global processes involved in their study of World History. Major themes include interactions between people and the environment, development and interactions of cultures, social structures, and economic systems, and the creation and expansion of states and political systems.

American Studies

Prerequisite: None.

Open to all eleventh grade students.

As a way of looking at the past, American Studies combines traditional aspects of historical inquiry with consideration of art, literature, music, and religion as they contribute to making and in turn reflecting America. Students in American Studies probe the material more deeply than is customary in courses with a survey approach to make the connections which exist across traditional disciplinary lines. Offered as an alternative to the US History survey course, this offering will approach the development of the American nation by focusing closely on the nation at six critical historical points."

History of the United States

Prerequisite: None.

Back to [Table of Contents](#)

Open to all eleventh grade students.

The United States History survey course is designed to teach students how to “be historians.” This dynamic class will investigate and discuss what historians do and how historians create with limited U.S. content as the vehicle. History is not static information to be learned, but a fluid emergence of ideas and events to be explored. The goal of the class is to get the students to approach history in this manner through the examination of various sources and by completing analytical projects. U.S. History will stray away from the “traditional” approach in a few ways. A text book will not be required for this course, as the teacher will supply either digital or paper handouts to address the various areas of content, providing students the opportunity to perfect their annotation skills in both the digital (using google docs) and paper platforms. The content will focus on 3 major events in U.S. history per term. Context will be given to set up the deeper dive into the particular event, eliminating the “race” through the chronology of U.S. history and allowing a greater focus on developing the skills of an historian. Therefore, lectures and traditional assessments will be limited or eliminated. The majority of assessments will be designed to apprise how the students are engaging content in relation to the historical skills being taught. The end goal is to have active students creating and reacting to history, not reciting historical trivia.

Making of the 21st Century: The Quinn-Ferguson Honors Seminar

Prerequisite: concurrent enrollment in or completion of US History or American Studies.

Requires an application be completed to gain entry into this course. Therefore this course is not available to new students.

This unique honors seminar offers a select group of upper-middlers and seniors who have demonstrated a significant ability to work independently and to contribute meaningfully to a seminar style class the opportunity to study key historical developments beginning with the fall of the Berlin Wall in 1989. The seminar will be broad in scope and interdisciplinary in nature.

Students will analyze major political, economic, social and cultural developments that have shaped the past two decades and that will likely shape the coming decades. Students will engage in research and problem solving in collaborative ways with the goal of gaining depth of understanding and the ability to problem-solve as part of the response to the topics and issues being studied.

The seminar will be mainly be taught by one teacher but will also involve numerous presenters, including current faculty and other experts in their fields of study. In addition to readings and discussions, many of which will be student led, participants in the Quinn-Ferguson Honors Seminar will also engage in significant group projects that may take the form of a debate before the school community, a documentary film, a musical or other artistic performance, or the creation of a website.

It is also expected that travel for lectures, performances or other course-related reasons will be an important part of the seminar experience.

Advanced Studies: Comparative Government and Politics

Prerequisite: concurrent enrollment in or successful completion of US History.

Department permission required for all students.

This course is an 11th or 12th grade elective.

Advanced Studies: Comparative Government and Politics takes a detailed look at the political, economic, and social characteristics of six countries: the United Kingdom, Russia, China, Mexico, Iran, and Nigeria. In addition, the course focuses on the roles of supranational organizations such as the European Union, NATO, the United Nations, and others. Key topics and concepts include the nature of political power, the reasons why some states succeed and others fail, the purposes of different institutions of government, the development of political culture, the importance of effective economic policy, and the crucial roles played by civil society, media outlets, political parties, policy-makers, and shifting demographics. The course also provides students with a framework for understanding how nations work and how they interact with each other."

Advanced Studies: United States History

Prerequisite: Permission from Department.

Students seeking to enroll in Advanced Studies should be able to work independently as well as contribute meaningfully to student discussions.

This course provides a brief survey of the Colonial period followed by a detailed study of the principal events, personalities, and movements responsible for the development of the United States from colonies into a world power. Designed to challenge students who have demonstrated an interest in the study of history, this course will encourage the development of critical thinking, reading, and writing skills while giving attention to thematic trends in US history across the centuries. The class will rely upon Robert Remini's, *History of the United States* as the course's foundational text, supplemented regularly with monographs and primary sources. As they hone their research skills, students will be encouraged to branch from the collective work of the course to pursue areas of specific interest within topic areas."

Advanced Studies: Economics

Prerequisites: successful completion of Algebra II.

A combined SAT score (CR & M) of 1100 or ACT score of 27 is required.

Recommendation of the department.

Open to 11th and 12th graders. This course can also be taken to earn credit in Math.

A full-year course in Microeconomics and Macroeconomics, with Microeconomics covered in the first half of the year and Macroeconomics covered in the second half. The year will begin with basic concepts in economics, including opportunity cost, production possibilities curves, and analysis of the margin. Topics in Microeconomics include supply and demand, taxes, externalities, costs, the theory of the firm, and the labor market. Topics in Macroeconomics include growth and GDP, inflation and CPI, saving and investment, unemployment, money and banking, and the open economy. Discussion of pertinent current events will complement the textbook. The subject matter of economics relies heavily upon mathematics, and this course will present all necessary economic content along with a solid background of the mathematical concepts. Graphs and equations will be integral aspects of many topics covered in the course. In situations when calculus would be useful, those concepts will be introduced with a perspective from calculus, however, no prior knowledge of calculus will be necessary.

AS: History of Race and Ethnicity in the US-Foundations of Ethnic History in the Americas

FALL. Prerequisite: None.

This course may be taken individually, or in addition to the other two terms of History of Race and Ethnicity in the U.S.

Foundations of Ethnic History in the Americas, will provide the basis for an understanding of race and ethnicity in the United States by considering the development of identity, what informs said identity development, and how access to power, or lack thereof, helps to shape the experiences of groups and individuals alike.

AS: History of Race and Ethnicity in the US-The Immigrant Experience

WINTER.

Prerequisite: None.

This course may be taken individually, or in addition to the other two terms of History of Race and Ethnicity in the U.S.

History of Race and Ethnicity in the US: The Immigrant Experience, will build on the foundation built in the fall term and consider the range of experiences among immigrants to the United States, paying particular attention to the experiences of immigrants from Asian and Latin American countries.

AS: History of Race and Ethnicity in the US-The Civil Rights Era and Beyond

SPRING.

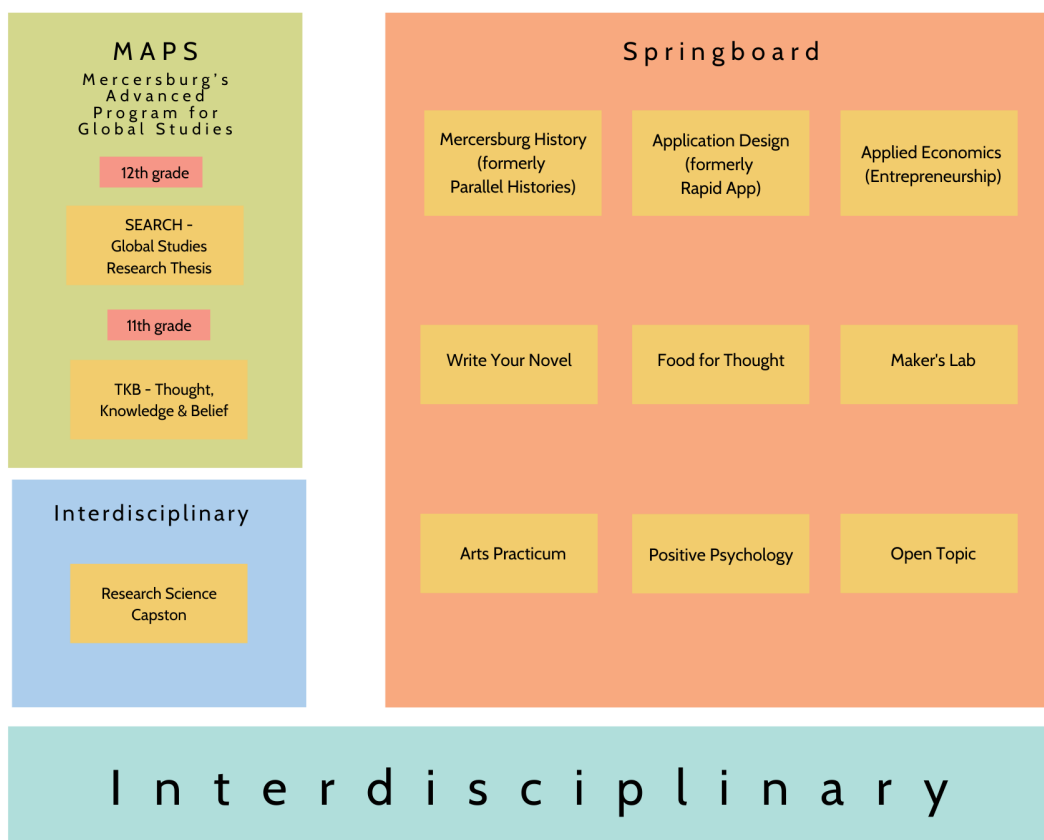
Prerequisite: None.

This course may be taken individually, or in addition to the other two terms of History of Race and Ethnicity in the U.S.

History of Race and Ethnicity in the US: The Civil Rights Era and Beyond, will consider the role race and ethnicity played in the battle for civil rights undertaken by a variety of groups in the mid-twentieth century through present day. An analysis of contributions made through artistic expressions in music, film, and television will be a consistent theme throughout this term.

Interdisciplinary

Course diagram



Springboard

Maker's Lab

Prerequisite: None.

Maker's Lab engages in the practice of "making". As practitioners in this course, students use a variety of physical materials and techniques, imagining and creating tangible products inspired by real-world wants and needs in the realms of privacy, the environment, education, economics, energy, food, biology, democracy, activism, healthcare, social justice, etc..

Springboard: Open Topic

Prerequisite: None.

Unlike the other Springboard courses, this course has no predetermined theme. Each student takes has an opportunity to immerse themselves into a topic they choose; then, through substantive research, they generate unique ideas or solutions to a well-defined challenge that they design, manage, and tackle during the winter and spring terms.

Positive Psychology

Prerequisite: None.

Positive psychology is a relatively new field that examines why people flourish. It expands psychology's traditional focus on pathology (what's "wrong" with people) to include an emphasis on human strength and virtue. Based on rigorous scientific experimentation, positive psychology explores traits like courage, optimism, empathy, honesty, humility, gratitude, and faith in an attempt to foster a life of meaning and value. This course was inspired by the most popular course in the history of Harvard University.

We will start by introducing the basic tenets of positive psychology through readings, activities, and application to students' lives. After engaging in significant self reflection on their own strengths, students will ultimately create something -- whether at the personal, institutional, or social level -- that draws on their strengths to make our lives fuller and more meaningful. Student interest will drive each individual final project, with the stipulation that it falls in the framework of positive psychology, or, with approval from the instructor, that it falls under the larger umbrella of the broader study of psychology.

Mercersburg's History

Prerequisite: None.

Students will learn the connection between historical events both national and international and the parallel effect they had on the Mercersburg Academy--or that the Mercersburg Academy had on them. But beyond learning the history, students will develop the skills to tell compelling stories of Mercersburg's alumni and faculty who were a part of some of the most interesting times and events since 1893, whether on our campus or somewhere around the world. By May, students - using various media - will synthesize archived documents, personal interviews, and broad investigative research in a way that reflects the work of many recent and popular history writers, documentary filmmakers, and radio producers."

Application Design

Prerequisite: None.

Application Development is a computer programming course that gives students the skills to develop applications that solve real problems or inefficiencies. Students work with multiple programming and scripting languages, as well as a range of hardware supported by those languages. In some cases, the solution may be done in a matter of minutes or hours. In others the solution may take a few weeks or months. Languages include C++, Java, JavaScript, Perl, Python, VisualBasic, Alice, as well as any other established languages students show interest in.

Write Your Novel...

Prerequisite: None.

In Write Your Novel, students dedicate themselves to writing a novel...or a collection of stories, a play, a screenplay for a major motion picture, or a series of teleplays.

By May, each student produces at least a working draft of one of the following:

- a 35,000 word novel
- 25,000 words of short stories
- a 2-hour play
- a screenplay for a two-hour film
- teleplays for three episodes of a television series, including a one-hour pilot.

Research Science Capstone

Prerequisite: Honors chemistry and / or honors physics or above

Once you select this course during registration, you will be sent an application to complete within 1 week.

This senior capstone course is not in Springboard nor in MAPS, but completion of the course fulfills the interdisciplinary graduation requirement.

In this capstone, students will have the opportunity to do independent work in any of the life or physical sciences offered at Mercersburg, or students could work across the scientific disciplines. In this research-heavy capstone, students will be immersed into a topic of their choosing, while also examining the ethics and social implications of their topic and various scientific disciplines (chemistry, biology, physics, environmental science, etc...) in hopes of viewing the vast world of science through a different lens. Research projects will ideally be hands-on and offer a potential solution to a real-world scientific issue. The course will conclude with a poster session or oral presentation.

Arts Practicum

Prerequisite: None.

Arts Practicum provides a yearlong exploration of an individual's unique voice in the arts. This course allows students to delve deeply into their own personal creative journey while supporting peers in collaborative projects. Students will develop a portfolio that will include self-directed projects as well as evidence of collaborative work. They will have the opportunity to learn the hard and soft skills of working within their industry and learning the standards and modern practices to be successful as a working artist or a creative in the contemporary world. Students will also delve deeply into the principles and foundational elements of their artistic medium, informing their work with research in and outside of the arts. Ultimately, this course allows the flexibility to work in the visual arts, the performing arts, music, or a combination of the various disciplines, where they will create conceptual art and develop skills with relevant technology and methodology.

Entrepreneurship

Prerequisite: None.

Entrepreneurship introduces students to the workings of small and larger business startups. The course asks students to design a business from the ground up, starting with a detailed business plan. The student's business will be evaluated in the fall and students will then self-divide into groups that further structure and formalize the business's numbers, model, advertising, etc.. After consulting with a mentor, the groups will complete the business plan, design a marketing campaign, and prepare a presentation for the final review of the business presented to a panel of business experts.

Food for Thought

Prerequisite: None.

In Food for thought, students explore these essential questions: How does food drive a curiosity for a deeper understanding of the self? How can food help us tell our personal stories? How does food

shape identity and culture and build community? How can food sustain our bodies as well as our minds and spirits? How does food impact our relationship to the environment? What does our shared history look like when examined through the lens of food? This course is immersive and applied, theoretical and personal. Students share family food stories, cook family recipes, visit markets, farms, and restaurants. For enrichment, the course also brings chefs, restaurateurs, and food writers to campus.

MAPS

Thought, Knowledge, and Belief - MAPS Core Course

Corequisite: Students must be in the MAPS program in order to take this course.

How do we both understand and engage with the world around us? The essential questions in the TKB course are fundamentally evaluative. MAPS students cannot be content with a mere awareness of global issues, but rather they must actively engage in a critical analysis of vital topics facing the world today. Through the study of moral philosophy, students in TKB will examine how essential questions about ethics, society, and the inherent obligations that exist within communities influence their understanding of world affairs. Students will consider such questions as whether there is such a thing as objective good, are there fundamental moral responsibilities, or when do ends justify means. Through the study of ethics and its application to current events, students will also investigate how such ways of knowing as intuition, language, memory, and reason influence perspectives on morality, society, and the obligations of humanity. In sum, TKB asks its students to look critically at themselves, at the world around them, and to form clearly expressed and supported opinions regarding vital issues of the day.

Global Studies Research Thesis - MAPS Core Course

Corequisite: Students must be in the MAPS program in order to take this course.

The capstone experience inside MAPS is a senior research project entitled S-E-A-R-C-H, which stands for Study-Engage-Appl-y-Research-Create-Help. All MAPS students must complete a S-E-A-R-C-H project using the principles of Challenge Based Learning.

Senior Year Capstone Project:

The purpose of the SEARCH capstone project is to engage with a global issue in a critical, analytical & innovative way.

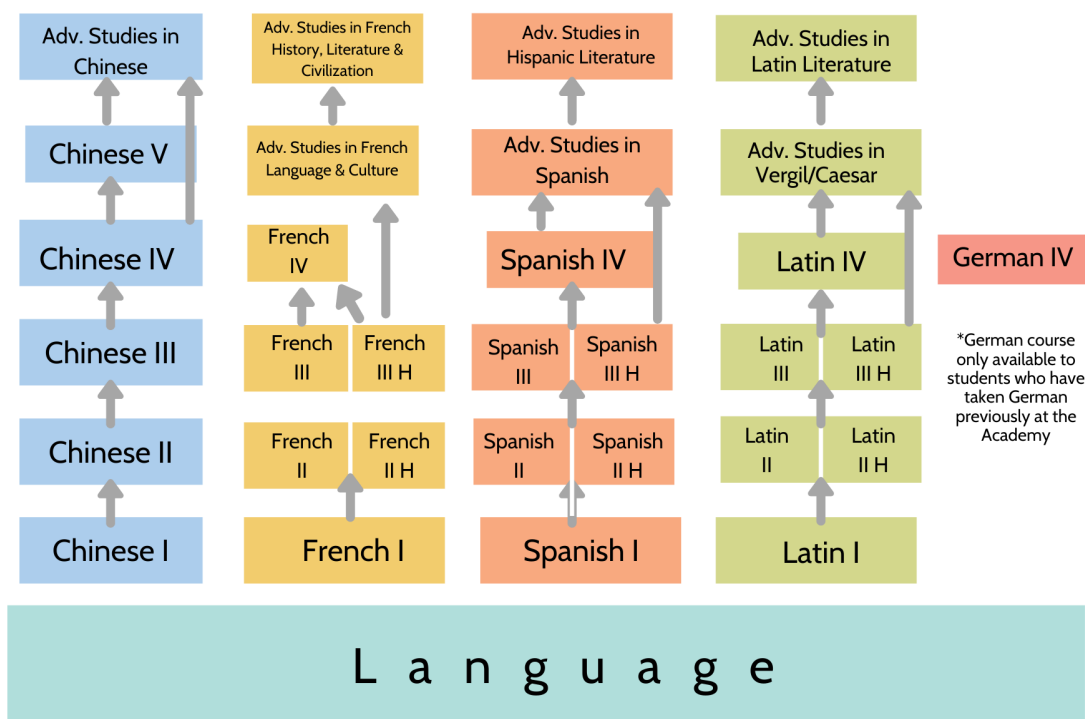
There are three major deliverables over the course of this year.

1. Research Paper - Each student will write an original thesis paper. Each research paper will consist of 25 - 30 pages of text (roughly 7,500-10,000 words excluding cover pages, bibliographies, etc.).
2. Proposal - Each student will create an actionable proposal. Each proposal will be a call to action based on the student's research. It may range from proposed legislation to a business proposal to a grant proposal, etc. This proposal will be 10 -15 pages in length.
3. Oral Presentation - Each student will orally present his or her thesis and proposal to a panel. Each presentation will last between 18 & 20 minutes, including a question and answer period.

In addition, students will continue their study of global topics, ranging from geo-political issues, selected areas in human geography to discussions of socio-economic matters. Most students will also present their ""Pathfinder"" topic early in the fall term and all students will take the Global Assessment Profile. The program director, as well as the TKB and SEARCH coordinators, will meet regularly with students, as a class or individually, for self assessment and review of the overall progress and adherence to the programs requirements.

Languages

Course diagram



Chinese

First Year Chinese

Prerequisite: None.

This course in Chinese language (Mandarin) introduces Pinyin (a Romanization system), components of Chinese characters in simplified (as opposed to traditional) forms, and basic grammatical features and sentence patterns. It emphasizes the acquisition of a solid command of Chinese sounds and tones and developing conversational skills through classroom exercises and continual exposure to audio-video texts. The learning of speaking, listening, reading and writing skills is conducted in contexts that are both culturally informative and relevant to everyday life language usage.

Second Year Chinese

Prerequisite: Chinese I

Chinese II reinforces the content covered in the previous year and continues to inform grammatical knowledge and develop language skills in all areas. It is intended to allow students to reach a higher level of precision in pronunciation and fluency in oral communication of familiar topics. In conjunction with a decreased dependency on Pinyin, essentially a tool for learning of Chinese sounds, this course deals with reading and writing more intentionally and systematically to allow students to become well-rounded learners and communicators in the Chinese language.

Third Year Chinese

Prerequisite: Chinese II

Like the other Chinese courses, Chinese III continues to place strong emphasis on the development of students' oral proficiency. Without compromising the importance of using relevant and day-to-day contexts to facilitate learning, this course orients students toward a higher level of emotional and evaluative expressions in all skill areas. Over the course of the year, students tackle an increasing number of grammatical and syntactic features that are Chinese-specific to enhance accuracy and expressiveness in communication. Students will be introduced to the development of Chinese society in China and Taiwan through films and participation in cultural events. In order to enhance their interaction with native Chinese speakers, they will engage with their Chinese peers on campus via various assignments and interview projects.

Fourth Year Chinese

Prerequisite: Chinese III

Back to [Table of Contents](#)

This course strengthens and further develops students' aural-oral communication skills required for daily functions and authentic expression of ideas as results of higher order thinking. In conjunction with this goal, the course also emphasizes the acquisition of more Chinese characters and vocabulary to enhance reading and writing Chinese texts of different genres. It continues the introduction of new lexical and syntactical features to help students toward the mastery of a core Chinese grammar. Students in the course approach learning through disciplined practice and communicative tasks in and outside of class.

Advanced Studies: Chinese Language and Culture

Prerequisite: Permission of the department after completion of Chinese IV.

This course strengthens and further develops oral communication skills required for daily life and the expression of ideas associated with higher order thinking. The course emphasizes the acquisition of Chinese characters/vocabulary to enhance reading and writing Chinese texts in different genres. Through projects, interviews, and a variety of authentic materials, this course continues the introduction of new lexical and syntactical structures to allow mastery of core Chinese grammar through interactive activities. At this level, students are expected to use Chinese only and will approach learning through disciplined practice and communicative tasks in and outside the classroom.

Spanish

First Year Spanish

Prerequisite: None.

The activities in this beginning level course engage students culturally while they develop listening, reading, speaking, and writing skills. Spanish is used in class from the very first day, and classroom immersion games are part of students' exposure to the language. Vocabulary and verbs are learned and reinforced through daily practice. The course emphasizes the learning of the present tense and basic grammatical structures with an introduction to other tenses. Students read short cultural articles and stories that serve as a continuous point of departure for the introduction and discussion of cultural topics related to Spain and Latin America.

Second Year Spanish

Prerequisite: Spanish I.

Students continue to practice the daily application of the four skills in Spanish: listening, reading, speaking, and writing. After a brief review of the present tense, students learn to use more complex grammatical structures and additional vocabulary and verb tenses. Emphasis is placed upon the study

of the two past tenses in Spanish, the preterit and the imperfect. Readings are continued as a medium to explore cultural themes of Spain and Latin America.

Honors Second Year Spanish

Prerequisite: Spanish I and permission of the department.

The Spanish II H level is designed for students who have demonstrated mastery of the skills employed in Spanish I at an advanced level. Students must demonstrate high interest and motivation for this level of study. This course is not solely text-centered; instead it relies on outside readings, music, cultural texts and other realia. Spanish is used exclusively in the classroom. Oral and written proficiency is stressed in preparation for the third-year composition and conversation curriculum.

Third Year Spanish

Prerequisite: Spanish II or II H.

This is an intermediate course in which students read and discuss authentic short stories, news items, poetry, art and popular culture from Spain and Latin America. In this course the students sharpen their skills in the present, past tenses, future, compound tenses, and the subjunctive mood and acquire more complex vocabulary. An emphasis is placed on the equal practice of the four uses of language: listening, writing, reading and speaking. Although the successful completion of third-year level work satisfies Mercersburg Academy's graduation requirement, students with permission are encouraged to continue their study at the advanced level.

Honors Third Year Spanish

Prerequisite: Spanish II or II H and permission of the department.

The class is conducted entirely in Spanish and students are expected to be able to participate accordingly.

This course, conducted entirely in Spanish, is an advanced intermediate language course designed to meet the needs of students who have demonstrated superior skills and interest in learning the Spanish language. The primary learning objectives of the course are fluency and cultural competence. Through aural/oral communication, grammar review, literature, and composition, students will have an active experience while learning. Students read, discuss, and write about a variety of current topics of interest, read materials including but not limited to short stories, poetry, and plays highlighting various regions of Spanish speaking heritage. The active study of grammar and language structure is an important component of the course, with the goal being to employ advanced grammar in creative compositions and conversation.

Successful completion of Spanish III H may allow students to enroll in Advanced Studies: Spanish Language and Culture course.

Back to [Table of Contents](#)

Fourth Year Spanish

Prerequisite: Spanish III or III H.

This course is a survey of different literary genres found within Spanish and Latin American written works. Students will explore prose and verse from the 16th century to the present along with links to folkloric music while developing their language skills and honing their vocabulary through round table discussions of their readings, follow up essays, and investigative projects. Existing parallel themes with the history, culture, and contemporary ideas of the Hispanic world are also examined. Authentic materials such as articles, web sites, films, software, and videos are used to provide further listening and speaking practice.

Successful students can continue their studies in Spanish by moving into the Advanced Studies: Spanish Language and Culture course.

Advanced Studies: Spanish Language and Culture

Prerequisite: Spanish IIIH or Spanish IV and permission of the department.

This is a demanding language course offered by the Spanish Section. Its rigorous aim and objective makes it equivalent to a third-year college course. The course develops intense listening skills with texts of different lengths, detailed reading comprehension, effective composing of essays based on both written and oral sources, and spontaneous creating of formal and informal oral responses corresponding to both conversational and presentational situations.

Students who complete the course may continue to the Advanced Studies: Survey of Hispanic Literature course.

Advanced Studies: Survey of Hispanic Literature

Prerequisite: AS: Spanish Language or permission of instructor.

This course will present opportunities for advanced students of Spanish literature to explore three genres: the fable, the short story and poetry. Each genre will be presented in one of the three terms. The fable constitutes the origin of many current cultural sayings and proverbs; as such it remains relevant. The short story survey includes historical events that distinguish the cultural perception and approach of short stories in Spain with that of Latin American countries. Lastly, the poetry presents a mixture of both Spanish and Latin American poets, as well as anonymous poems with strong historic background."

French

First Year French

Prerequisite: None.

The activities in First Year French engage students culturally as well as structurally while they develop skills in listening, reading, speaking, and writing. French is used in class from the very first day, and listening activities with native as well as non-native speakers are part of students' daily practice. They start speaking French in class through guided but authentic dialogue, conducted in pairs or triads, as vocabulary and verbs are learned and reinforced through daily practice. Students read short poems, articles, and cultural essays. They begin learning to write in French using notes, postcards, and later, letters and poems.

Second Year French

Prerequisite: French 1.

Students continue to practice daily application of the four skills in French: listening, reading, speaking, and writing. French is the language of instruction. Emphasis continues to be placed upon listening and speaking proficiency through frequent small-group activities. Exercises promoting understanding of culture are integrated with mastery of elementary verb conjugation and grammatical structures. Vocabulary is studied in context of both visual and textual reading material. Ability in writing grows from simple sentences to the beginnings of paragraph-length discourse. Authentic situations for the use of French are provided wherever possible. The book series is supplemented by readers to promote discussion.

Honors Second Year French

Prerequisite: French 1 and permission of the department.

While the lexical themes, cultural topics, and structural content of this course are similar to those in French 2, the pace of this course is considerably faster. Supplementary readings are included, such as short stories, poetry, drama, newspaper and magazine articles. Small group work is a daily expectation, allowing students to practice speaking and listening in authentic conversational dynamics. The second term culminates in a project involving a skit or a formal oral report on a researched cultural topic.

French 2H students typically continue in French 3H due to their increased interest and motivation to learn and engage in French.

Third Year French

Prerequisite: French 2 or French 2H.

Students speaking French at level 3 can use the present, immediate future, the past perfect, and the pluperfect, plus the conditional and the subjunctive modes. Students' ability to understand spoken French is honed through daily exposure to native and non-native speakers via video and audio work. Short stories and newspaper articles are included in the reading curriculum. Students practice writing summaries and interpretations in an organized manner in all tenses. Although successful completion of level III work satisfies Mercersburg Academy's language requirement in French, students with permission are encouraged to continue their study at the advanced level.

Honors Third Year French

Prerequisite: French 2H, or French 2 w/ departmental permission.

This course challenges advanced intermediate students to master almost all elements of French in preparation for advanced study. They work with partners and in small groups, speaking on cultural themes and familiar topics. Students' listening abilities are developed daily through intensive work with the teacher as well as with audio and video of native speakers. They read stories, poetry, biographical portraits and articles from newspapers and magazines. Writing assignments are appropriate to advanced French ability, and include cultural research as well as literary interpretation. Some 3H students are successful enough to take Advanced Studies in French Language and Culture without taking French 4.

Fourth Year French

Prerequisite: French 3 or French 3H.

Students in French 4 learn about the francophone world from geographical, historical and literary perspectives. Studies begin with a blend of lyric poetry, fables, fairy tales, odes and sonnets from the 17th and 18th centuries. 19th-century short stories provide elements for deeper stylistic comparison. The Francophone world is presented via 20th century selections from the Francophone world, including material from all five of the continents where French is spoken. Grammar and vocabulary are examined via the readings. Each is presented in conjunction with historical events to expand on context. Linguistic structures and lexical mastery constitute critical elements of this course.

French History and Literature

Prerequisite: Advanced Studies in French Language and Culture or, in unique cases, French 4 and permission of the department.

Students must enjoy reading to encounter success in this course.

This course introduces advanced students to the scripted study of a representative body of literary selections, presented in their historical context. Students examine and appreciate culturally rich art and music. They learn the techniques of literary analysis, as well as a basic vocabulary of critical terms. Students apply strategies for connecting historically significant events and people to varied literary

and stylistic structures. Reading, discussion, and writing in French are essential components. Students also delve into contemporary culture, asserting declarative knowledge of the past events that inform current practices.

Advanced Studies: French Language and Culture

Prerequisite: Permission of the department after completion of French 3H or French 4.

All works are in French, so students must enjoy reading to encounter success in this course.

In this course, students integrate varied language skills, applying interpretation and synthesis to both written text and geographically varied aural forms. Students practice both formal and informal writing. They refine their interpersonal and presentational speaking. Aural comprehension is honed via authentic recordings to develop students' comprehension and analytical skills. Evaluations assess both students' comprehension of content and their application of skills. They read excerpts from wide-ranging sources, presenting diverse stylistic choices and linguistic forms. Students explore international current events and present reactions to them.

Advanced Studies: Francophone History, Literature, and Culture

Prerequisite: Advanced Studies in French Language and Culture, or in unique cases, French 4 and permission of the department.

Students must enjoy reading to encounter success in this course.

This course introduces advanced students to the scripted study of a representative body of literary selections, presented in their historical context. Students examine and appreciate culturally rich art and music. They learn the techniques of literary analysis, as well as a basic vocabulary of critical terms. Students apply strategies for connecting historically significant events and people to varied literary and stylistic structures. Reading, discussion, and writing in French are essential components. Students also delve into contemporary culture, asserting declarative knowledge of the past events that inform current practices.

Latin

First Year Latin

Prerequisite: None.

This course introduces students to the fundamentals of classical language study through vocabulary acquisition, grammar instruction, and translation of culture-based passages. Students learn to compare the mechanics of the Latin language with their native language and also develop a wider English vocabulary through their exposure to Latin roots. The primary skill of reading is emphasized, though pronunciation of the language and manipulation of the Latin language support the overall goals of the course. Using a technology-based curriculum, Latin students research and present aspects of Roman culture and history in preparing to take the first level of the National Latin Exam.

Second Year Latin

Prerequisite: Latin I.

Students continue their study of Latin grammar and Roman culture and begin to translate longer and more complex prose. By reading and discussing interesting authentic and graded texts, students develop their interests in mythology and Republican and early imperial era Roman culture and become familiar with the uses of the subjunctive, infinitives, and all case uses. Students learn to break down and etymologize Latin words in order to expand their reading vocabulary. Activities include web based practice and research, word derivation, and more advanced presentation skills.

Honors Second Year Latin

Prerequisite: Latin I and permission of the department.

Students will master the basic vocabulary and advanced grammatical structures of classical Latin while making a swift transition from 'made' Latin into authentic Roman texts. The pedagogy of this course will favor the grammatical method rather than the reading method in order to utilize the students' strengths in memorization and linguistic acquisition.

Third Year Latin

Prerequisite: Latin II or Latin II H.

Student in Latin III consolidate their vocabulary and grammatical knowledge while reading longer connected prose pieces from classical, medieval, and neo-Latin authors. Emphasis is on ability to read and understand accurately rather than on technical analysis of the text. Projects designed to engage the student in the culture and literature of the eras of Latin predominance allow student success in a number of venues, not simply grammar-translation work.

Honors Third Year Latin

Prerequisite: Latin II Honors or permission of the instructor.

This course reviews all grammatical and morphological info covered in Latin II and covers the basic third-year level course materials in the first two terms, moving into AP level writing skills and texts in the spring term. This is a year-long accelerated course in which students will master the advanced

grammatical structures of classical Latin while making the transition from 'made' Latin into authentic Latin texts. The pedagogy of this course will favor vocabulary acquisition and grammatical structures using the subjunctive, indirect statement, and the passive periphrastic.

Fourth Year Latin

Prerequisite: Latin III or Latin III H or permission of the department.

This course introduces students to the traditions of Latin lyric poetry in the Golden and Silver Ages as well as later imitators inspired by Ovid, Horace, and Vergil. Students explore the world that created the poets as well as the worlds that the poets built within their genre. They strengthen their understanding of meter and rhetorical devices used by the lyric poets and investigate the poets' agendas. This course calls for a strong but developing understanding of Latin forms and vocabulary as well as familiarity in translating basic Latin texts. We continue to build strength in these areas through the course of the year.

Advanced Studies: Latin Vergil-Caesar

Prerequisite: Latin third-year level or by permission of the department.

This course follows the Vergil AP syllabus, studying the traditions of Latin lyric and epic poetry in their historical and literary contexts. The course relies on primary and secondary sources for critique and analysis of the literature and stresses essay-writing skills and technical analysis of the text.

Advanced Studies: Ovid

In the AS Ovid course, we read selections from Ovid's *Metamorphoses* and *Amores*, examining the ideas of mock epic and the influence of Ovid's contemporaries and forebears on his own work. We consider especially the intersection of humor and politics in Ovid's work while paying close attention to the technical mastery that makes him the master of his genres.

Advanced Studies: Catullus In the AS Catullus course, we read selections from the *Carmina Catulli* and reflect on Catullus's take on love poetry and the very purpose of poetry itself. Attention to the influence of the Alexandrians on the neoterici to whom Catullus belongs is a focus of the course, as is the question of "who is the real Catullus?"

Advanced Studies: Horace

The AS Horace course focuses on the Epicurean influences on this wise author as we look through his *Opera*. The influences of politics, philosophy, and personal preference on achieving the *summum bonum* will lead us back to Epicurus, Epictetus, and Cicero on occasion.

Advanced Studies: Latin Literature

Prerequisite: Latin AP or by permission of the department.

This course studies the traditions of Latin lyric poetry especially as practiced by Catullus, Ovid, and their contemporaries. The texts include Carmina Catulli and Ovid's Metamorphoses and Amores as well as Horace's Odes. Students learn to use primary and secondary sources for critique and analysis of the text and develop essay-writing skills in order to analyze the authors' different approaches and goals. They build an understanding of meter and rhetorical devices used by the lyric poets and, more importantly, discover how such secondary techniques support the authors' purposes. The course presupposes a fairly sophisticated understanding of Latin forms and vocabulary as well as competency in translating basic Latin texts, though some review continues through the course of the year. The Latin Literature course is also offered as a series of term courses: Ovid (fall), Catullus (winter), and Horace (spring)."

German

German courses are only offered to students who have previously studied German at Mercersburg Academy

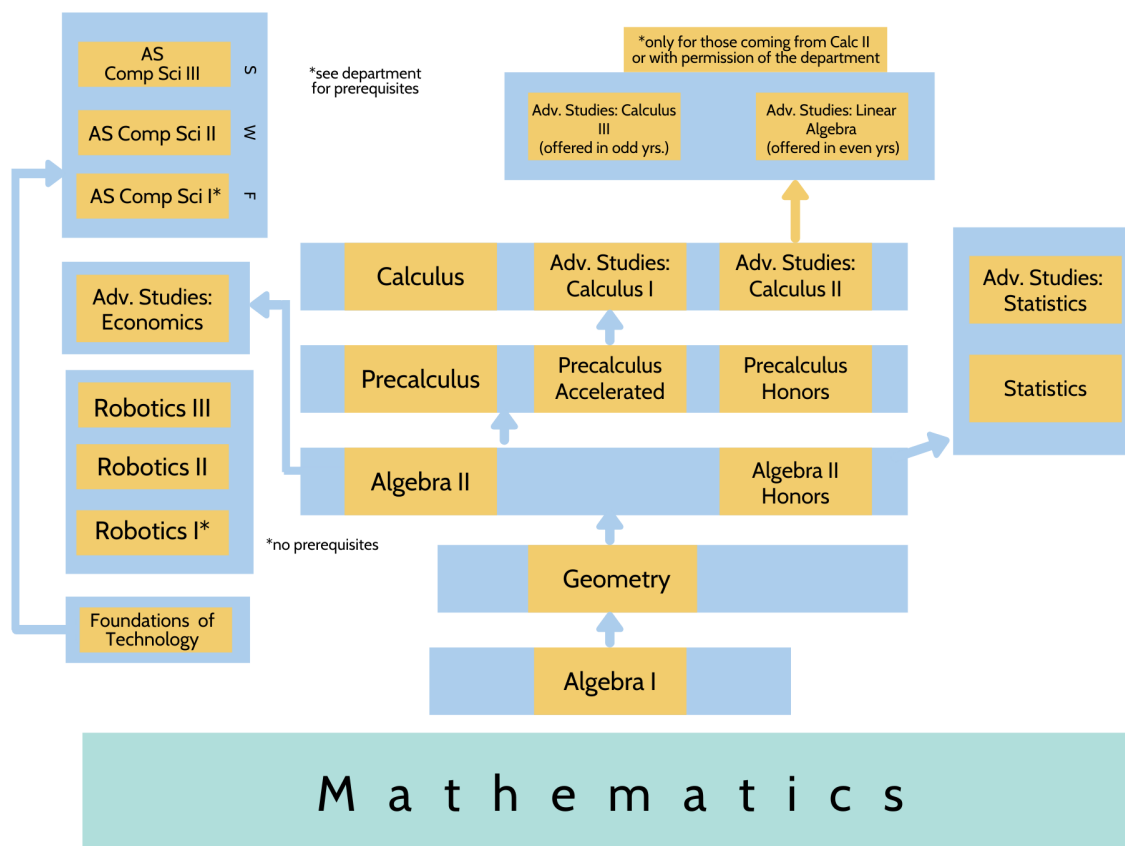
Directed Study: Advanced German

Prerequisite: Honors Third Year German or permission of the department

Students in this course will continue to expand their knowledge and understanding of German language and culture through the study of German literature, cinema, and music, as well as traditional language learning methods. The students will work with the teacher to develop a course of study appropriate to each student as well as the whole class."

Math

Course diagram



Course Descriptions

Algebra I

Prerequisite: Recommendation of the department

This course emphasizes a strong understanding of foundational algebraic concepts through applications and modeling. Topics include the study of solving equations and inequalities, graphing lines, and solving systems of equations. Additional topics may include properties of exponents and square roots; basic factoring; and an introduction to probability. There is focus on developing logically sound mathematics as well as mechanical and problem solving skills with an emphasis on the usefulness of mathematics in modeling real-world situations.

Geometry

Prerequisite: Algebra I.

A course consisting of traditional topics in plane geometry and review and extension of notions of elementary algebra, with particular emphasis on geometric applications.

Accelerated Geometry

This course, offered by invitation of the department to students with strong aptitude in mathematics.

In Accelerated Geometry, students will go into greater depth, examine additional topics and seek to challenge at a greater level than the regular Geometry course.

Increased emphasis on proof and additional preparation for Algebra II is part of the course.

Algebra II

Prerequisite: Algebra I and Geometry.

The department may recommend this course for strengthening important skills in preparation for Precalculus.

In this course, students will strengthen their understanding of algebraic concepts and technical ability through the investigation of elementary functions and a problem solving situations. Acquisition of skills is emphasized with use of the graphing calculator. This course completes the graduation requirement in mathematics.

Honors Algebra II

Prerequisite: Exemplary performance in Algebra I, Accelerated Geometry. Recommendation of the department.

Back to [Table of Contents](#)

This course, for highly motivated students, moves at a faster pace and in greater depth than standard courses. When considering students for this course the department seeks evidence of strong aptitude, quick and in-depth comprehension, and a distinguished performance in past mathematics courses. Topics covered, in addition to a review of Algebra I concepts, include in-depth coverage of functions, polynomials, exponential and logarithmic functions, and a thorough exploration of trigonometry, both through the right triangle and unit circle approaches.

Statistics

Prerequisite: Successful completion of Algebra II.

Open to 11th and 12th who are interested in the practical topics of statistics.

This course addresses the fundamentals of exploratory data analysis or how to 'let data speak.' Students will learn key elements of elementary data analysis, experimental design, survey design, the normal model, linear modeling, probability, and an introduction to inference. The emphasis in this course will be on the statistical thinking behind data gathering and interpretation. Statistical techniques will be applied to a wide variety of subjects, including natural science, economics, business, psychology, and politics. Students will engage in numerous hands-on activities in class to reinforce topics and will also be asked to conduct several statistical projects throughout the course of the year. The reasoning process involved in statistical analysis will be emphasized more than the computational methods. This course will help students become discerning consumers of statistics, teaching them to analyze the numbers from surveys, election polls, and medical studies.

Advanced Studies: Statistics

Prerequisite: Successful completion of Algebra II and/or recommendation of the department.

Open to 11th and 12th graders.

Data analysis, survey and experimental design, modeling, probability, and statistical inference are among the topics covered. This course is excellent preparation for college-level courses in a number of disciplines. This is an engaging and rigorous course that demands strong reading comprehension as well as sound mathematical reasoning.

Advanced Studies: Economics

Prerequisite: Algebra II and/or a recommendation of the department required.

Open to 11th and 12th graders.

This course can also be taken to earn credit in History. A full-year course in Microeconomics and Macroeconomics, with Microeconomics covered in the first half of the year and Macroeconomics covered in the second half. The year will begin with basic concepts in economics, including opportunity cost, production possibilities curves, and analysis of the margin. Topics in Microeconomics include supply and demand, taxes, externalities, costs, the theory of the firm, and

the labor market. Topics in Macroeconomics include growth and GDP, inflation and CPI, saving and investment, unemployment, money and banking, and the open economy. Discussion of pertinent current events will complement the textbook. The subject matter of economics relies heavily upon mathematics, and this course will present economic content along with related mathematical concepts when applicable. Graphs and equations will be integral aspects of many topics covered in the course. In situations when calculus would be useful, those concepts will be introduced with a perspective from calculus, however, no prior knowledge of calculus will be necessary.

Precalculus

Prerequisite: Algebra II or the equivalent and/or recommendation of the department

A precalculus course with emphasis on data analysis, properties of functions, and trigonometry. Mathematical modeling and applications of functions are regularly highlighted. Graphing calculators and other technology are used extensively.

Accelerated Precalculus

Prerequisite: Final course grade of at least 88 in Accelerated Algebra II, or the equivalent, and/or permission of the department.

This is a course for students who have demonstrated solid ability and motivation in their study of intermediate algebra.

In addition to furthering the study of the elementary functions from Algebra II, topics include trigonometric, polynomial, rational, inverse, exponential, and logarithmic functions. Graphing calculators and other technology are used extensively. The course is designed to foster the mathematical maturity needed for the study of advanced math courses at Mercersburg Academy and mathematics courses at the college level.

Honors Precalculus

Prerequisite: Honors Algebra II, or the equivalent, and recommendation of the department.

This honors course moves at a fast pace with much greater expectations than standard courses. When considering students for this course, the department seeks evidence of self motivation, strong aptitude, sustained effort, quick and in-depth comprehension, solid time management skills, and a distinguished performance in past mathematics courses, including trigonometry.

Topics include: trigonometry review; polar coordinates and parametric equations; vectors in two and three dimensions; systems of equations and inequalities; matrix operations; conic sections; sequences and series; counting and probability; limits and derivatives.

Calculus

Prerequisite: Successful completion of Precalculus and recommendation of the department.

This class serves the student who wishes to study calculus at a less demanding pace than that of the Advanced Studies level.

Technology will be utilized to teach the practical applications of calculus. The course will thoroughly prepare students for a first-year college course in calculus, and will provide a sound culminating experience for students whose future plans do not include additional study of mathematics. This course offers an ideal alternative for 11th and 12th graders who do not qualify for the Advanced Studies level but are interested in studying advanced mathematical topics in preparation for college.

Advanced Studies: Calculus I

Prerequisite: Final course grade of at least 90 in Accelerated Precalculus and/or permission of the department.

This course aligns with most traditional college Calculus I classes and covers a similar curriculum. It is a rigorous course requiring a strong level of commitment and is intended for students with evidence of a high level of success in mathematics and a desire to study mathematics at a higher level before entering college. Topics include limit theory, differential calculus, introductory integral calculus, elementary differential equations, and applications related to these topics. .

Advanced Studies: Calculus II

Prerequisite: Strong performance in Honors Precalculus and/or equivalent with recommendation of the department.

This course covers the material in Advanced Studies: Calculus I plus additional topics traditionally covered in a college level Calculus II course. The additional material covers topics in polar, parametric, and vector functions, Taylor and Maclaurin series, and additional topics as determined by the instructor. The course is rigorous and presumes a very solid background, demonstrated aptitude, and a strong commitment on the part of the student. The appropriate section for each student is determined based on background and aptitude.

Advanced Studies: Calculus III

Prerequisite: Successful completion of Advanced Studies: Calculus II and/or recommendation of the department.

This demanding course continues on the usual path of college-level mathematics for students interested in careers in mathematics, physics, and engineering. The content focuses on material typically found in a traditional Calculus III course. Multiple integrals, partial derivatives, vector functions and abstract linear algebra are among the topics studied.

Back to [Table of Contents](#)

Advanced Studies: Linear Algebra with Applications

Prerequisite: successful completion of Advanced Studies: Calculus II.

Recommendation of the department.

Open to 11th and 12th graders or by permission of the department for younger students who have already completed Advanced Studies: Calculus II.

This is a year-long mathematics elective which will cover the theory, practice, and a variety of modern applications of Linear Algebra. The course will continue and deepen the work on matrices begun in the Honors Precalculus courses. Some of the topics covered will be systems of linear equations, the algebra of matrices, Euclidean n -space, abstract vector spaces, determinants, linear transformations and eigenvalues.

Foundations of Technology

SPRING

Prerequisite: None.

This is an introductory course designed to give students knowledge and skills in technological problem solving, design, computer programming, electronics, machines, tools, and 3D modeling. This course is ideal for students interested in careers in STEM, engineering, computer programming, and robotics.

Robotics I

FALL

Prerequisite: Interest in math and problem based learning.

Open to all students. This course can also be taken to earn credit in Science.

This course combines skills in mathematics, physics, and computer programming in order to learn the basics of robotics. An introduction to programming, simple machines, sensors, and movement are studied in order to build autonomous robots. Class time is spent working on building robots and projects will be given on a daily and weekly basis. A final project will be given in lieu of an exam.

Robotics II

WINTER

Prerequisite: Robotics I and interest in math and problem based learning.

Open to all students. This course can also be taken to earn credit in Science.

This course builds on the knowledge obtained in Robotics I. Topics covered will include complex machines, advanced programming algorithms, and complex movement and sensor capabilities. A focus will be placed on teamwork when completing tasks. Class time is spent working on building

robots and projects will be given on a weekly and bi-weekly basis. A final project will be given in lieu of an exam.

Robotics III

SPRING

Prerequisite: Robotics II and interest in math and problem based learning.

Open to all students. This course can also be taken to earn credit in Science.

This course builds on the knowledge obtained in Robotics I and Robotics II. This course will spend its time focused on complex robotics projects which groups will tackle for the duration of the term. Teamwork and time management are critical elements to completing the tasks. The course combines elements of mathematics, programming, and physics in engineering design problems which students must build robots to solve. Classtime is spent working on building robots and projects will be given for the term.

Introduction to Computer Science

FALL

Prerequisite: None

This term course will focus on introducing the elementary concepts of computer science and programming. It will include an introduction to the Java language, the basic of object oriented programming, primitive data types & variables, character strings, the basics of loop structures and the basics of logic statements.

Advanced Studies: Computer Science I

WINTER

Prerequisite: Introduction to Computer Science or permission of the department.

This term course will cover roughly half of the current AP Computer Science AB course topics. The topics will include in depth object oriented programming, implementation of primitive data types & variables, and character strings processing. The course will be taught using a number of free online resources and the CodeHS website.

Advanced Studies: Computer Science II

SPRING

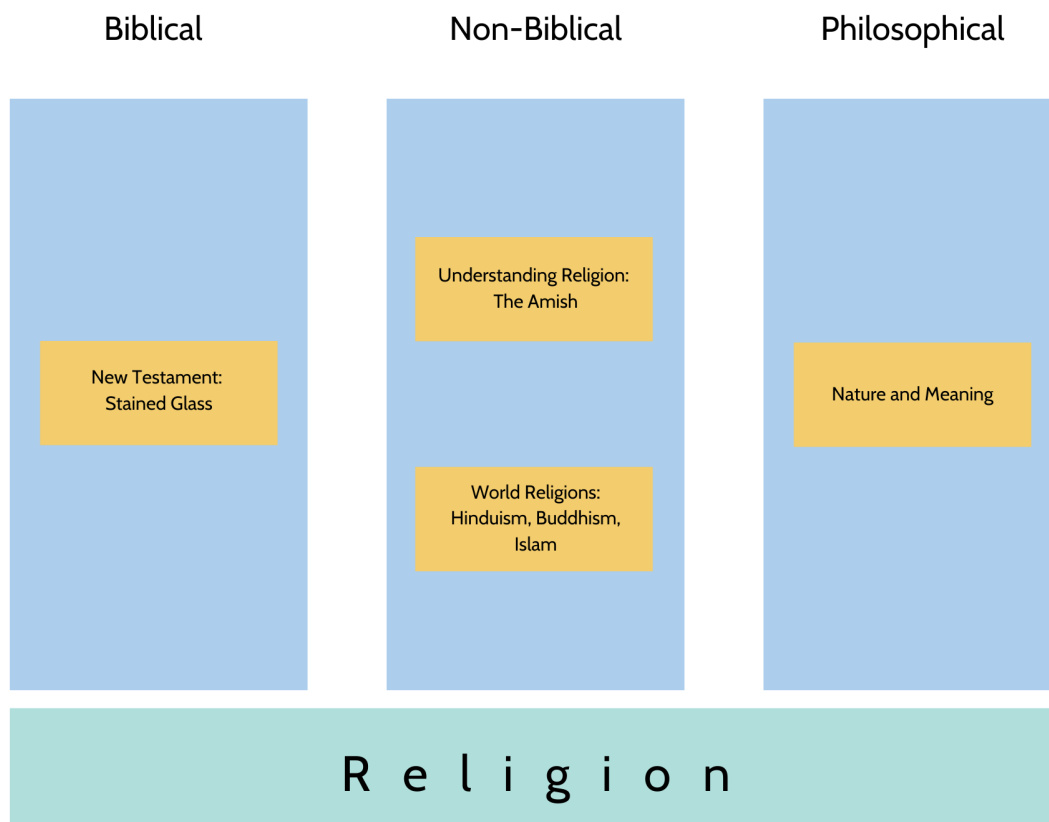
Prerequisite: AS: Computer Science I.

This term course will be a continuation of AS:Computer Science I. At the end of the two terms, students will have covered many of the current AP Computer Science AB course topics. Students wishing to challenge the exam may need to do extra preparation. The course will continue to be taught using a number of free online resources and the CodeHS website.

Back to [Table of Contents](#)

Religion

Course Diagram



Course Descriptions

Understanding Religion: The Amish

FALL. Prerequisite: None.

This course will engage students in the study of lived and formal religion. It will address various elements found in all religions, such as codes of belief, practices associated with a religion, religious ritual and how community is associated with religion. In focusing on these elements, students will gain a better understanding of how a religion functions. While examples will be used from various world religions, the course will consistently use the Amish as a case study for understanding various tenants of a religion. Students will wrestle with how the Amish balance life within their religious community and the wider world and how this affects their daily life. Students will also take a field trip to Lancaster County to visit the Amish.

Introduction to New Testament: The Gospels Through Stained Glass

WINTER, SPRING. Prerequisite: None.

Open to all students in 10th, 11th, and 12th grade.

This course examines the life and times of Jesus of Nazareth through the stained glass in the Irvine Memorial Chapel. Emphasis will be placed on the four Gospels and understanding their depictions in the Chapel. Students will not only learn the political/religious/social context of the teachings of Jesus, but the criticism that surrounds this figure. Attention will also be focused on basic elements of stained glass, their role in the church, and the history of the Mercersburg Chapel.

Introduction to World Religions

FALL, WINTER, SPRING. Prerequisite: None

Open to all students in 10th, 11th, and 12th grade.

This course explores the religious dimension of human existence by close examination of three major non-Western faith traditions. With careful attention to particular religious themes and existential questions common to each of the traditions, we aim to develop an understanding of the theory and vocabulary necessary to engage critically religious faith and practice as embodied in individuals and communities. Emphasis will be given to the study of doctrinal beliefs, religious histories, sacred texts, and cultural expressions. This course is not designed to inspire faith or conversion. Rather, it aims to provide intellectual challenge, and to encourage deeper levels of understanding and appreciation for the religious dimension of human existence. In particular, we will attend to the existential questions: Where did we come from? Where are we going? How are we to live as authentic human beings?

The Nature and Meaning of the Universe

FALL, WINTER, SPRING.

Back to [Table of Contents](#)

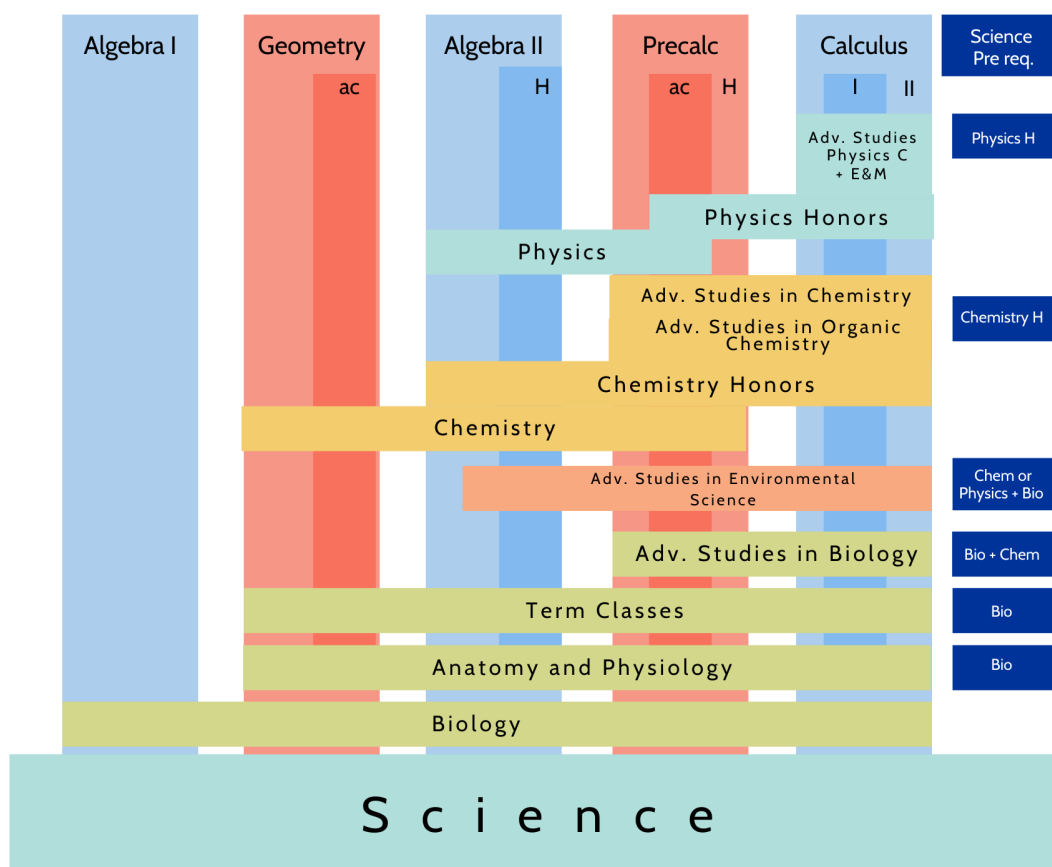
Pre/Corequisite: Honors Power, Justice, & Authority or higher. Other students must obtain permission from the department to enroll in this course.

This course is most suitable for 10th, 11th, and 12th graders with a strong interest in philosophy, science, and religion.

This course will include discussions of the following areas: understanding the nature of truth, proof, and knowledge; faith vs. empiricism; cosmology vs. mythology; the question of design; the origin of life, evolution vs. creation; and scientific/medical ethics. While the course will earn credit in and fulfill the requirements of the religion department, it will frequently be team-taught with a member of the science department.

Science

Course diagram



Course Descriptions

Biology: Introduction to Biology

Prerequisites: None

Grade level: Grade 9 or 10

This course is an introductory-level biology course.

Topics in this course include:

- (1) Experimentation and the Scientific method—students will learn the theory of research, conduct their own research and present their findings;
- (2) Ecology—ecosystem structure, symbiosis, energy flow, nutrient cycles, and population dynamics;
- (3) Human, plant, and animal systems—reproduction, nutrition, and circulation; Genetics—DNA replication, mitosis and meiosis, Chromosomal abnormalities, mutation;
- (4) Evolution—mechanisms of evolution, classification, and nomenclature.
- (5) Molecular biology - lipids, carbohydrates, proteins.
- (6) Genetics - Medelian and non Mendelian
- (7) Cell replication - mitosis and meiosis

Two different classes will be running concurrently to allow for different pacing and optional activities.

This course develops the basic skills that Mercersburg wants all biology students to master: use of the scientific method, proper design of experiments, use of proper sampling methods, ability to collect data and analyze it, scientific writing, microscope use, dissection techniques, and oral presentations with diagrams. Students who are more interested in studying biology at the cellular and molecular level should choose.

Applied Human Anatomy & Physiology

Prerequisite: Biology.

Preference given to grades 11 and 12.

The subject matter of this course is designed to build on a student's previous experience in Biology and delve deeper into the individual systems of the human body. In addition to the anatomy of each system, students will learn the physiological basis for the respiratory, circulatory, excretory, musculoskeletal, endocrine and nervous systems. Students will then use this knowledge to recognize, evaluate and treat common wilderness injuries. These conditions include, but are not limited to, soft tissue and skeletal injuries, head and spine trauma, infections, and environmental injuries. This course

is lab intensive and will include field trips for extensive practical application and evaluation of knowledge and skills. At the completion of the course students will be certified in CPR from the American Red Cross and also potentially receive Advanced Wilderness First Aid certification, recognized by DOT departments nation wide, from SOLO, the leader in wilderness and emergency medicine.

MOE instructors will be involved in the teaching and evaluation of all of these skills.

Advanced Studies: Biology

Prerequisite: Biology and Chemistry each with a yearly average of 90 or above (or Honors Chemistry with an average of 85 or above).

Permission of the department is required.

The AS: Biology course is designed to offer students a solid curriculum in evolutionary biology concepts centered around four 'Big Ideas':

Big Idea 1: Evolution drives the unity & diversity of life.

Big Idea 2: Biological systems utilize energy to maintain homeostasis for survival.

Big Idea 3: Living systems store, retrieve, and transmit information generation to generation.

Big Idea 4: The interaction of biological systems with each other and abiotic factors possess complex properties.

This course shifts from a traditional 'content coverage' model of instruction to one that focuses on enduring, conceptual understandings and the content that supports them. Students will spend less time on factual recall and more time on inquiry-based learning of essential concepts which will help them to develop the reasoning skills necessary to engage in the science practices.

Advanced Studies: Environmental Science

Prerequisites: One year of a life science and one year of a physical science (chemistry or physics) with a grade of 85 or better (or 83 or better in an honors class).

Note: Open to 11th and 12th graders who had grades of 85 or better in Chemistry or Physics or who had grades of 83 or better in Chemistry H or Physics H.

Environmental Science is the study of the natural sciences in an interdisciplinary context that includes the consideration of people and how they have influenced the environment. Students will use a variety of methods (field studies, case studies, lab analysis and Internet research) to explore and understand the many aspects of biology, ecology, earth and atmospheric science, chemistry, physics, agriculture and human population dynamics that are interrelated in the study of environmental science.

Stream and Estuarine Ecology

FALL.

Prerequisite: Biology

Humans have long been fascinated with the oceans and bays leading to them. Eighty percent of the human population lives within 60 miles of an estuary or coastline; water, whether for drinking, irrigation, fishing, or recreation is an important commodity. Using the Conococheague Creek and the Chesapeake Bay as models, this class will study how we investigate, monitor, and protect these systems, which are central to human survival. Freshwater streams, estuaries and coastal zones are among the most productive and diverse ecosystems of the world. With their great variety of environments, these systems provide fascinating sites for study and research.

This interdisciplinary course addresses the ecology of streams and estuaries. We will investigate the general ecological principles that govern their productivity and diversity, including their hydrodynamics, chemistry and plant and animal community structure.

This interdisciplinary course addresses the ecology of streams and estuaries. We will investigate the general ecological principles that govern their productivity and diversity, including their hydrodynamics, sedimentology, chemistry and plant and animal community structure. The processes in these zones affect coastal and oceanic water quality, shelf productivity and the global climate.

Introduction to Biotechnology and Genetics

WINTER.

Prerequisite: Biology.

Grade Level: 10, 11 or 12

This course will utilize a hands-on laboratory based approach to explore the basics of DNA, genetics and biotechnology.

Knowingly and unknowingly, the products of biotechnology surround us today. Understanding this relatively new and often misunderstood science will help students to make better choices, whether as a purchaser of food, a voter, or as a consumer.

Labs will include a DNA extraction, gel electrophoresis including an exploration of DNA in forensics, pcr, bacterial transformation, and more.

More advanced projects may include fish barcoding, an analysis of genetically modified organism (GMO) products in food, an analysis of human ancestry through DNA testing or bacterial transformation of the pGlo gene from jellyfish. Fish DNA Barcoding allows students to identify the species of a fish sample based on its DNA sequence of a gene. With this kit, students will be able to test a piece of seafood from the dining hall or local market and verify if it is indeed the advertised fish species. A GMO (genetically modified organisms) activity allows students to gather sample food items

from the grocery store or local fields, extract DNA from the samples, and identify the presence or absence of GMO sequences.

Forensic Science

SPRING. Prerequisite: Biology

Grade Level: 10, 11, or 12.

The forensic science class will incorporate elements of life science, physical science, mathematics, and criminal justice disciplines to introduce students to the role of science in the criminal justice system. The class will be lab based, with each lab unit focused around one type of analysis would be used to solve a crime. Case studies from real life crimes will be read and analyzed and related to lab.

Chemistry

Prerequisite: Successful completion of Biology and Algebra 1

Corequisite: Geometry or higher

This course will explore traditional chemistry topics through practical, real world applications. Topics could include the chemistry of food, chemistry of art, chemical manufacturing and global warming. This course will be highly laboratory and project based.

Honors Chemistry

Prerequisite: High grades in math and 90% or higher in biology; demonstrated strong work ethic.

A high SSAT math score (around 700 or higher).

Corequisite: Geometry ac, Algebra II H, Algebra II ac, Precalculus ac or higher.

Honors Chemistry (Chemistry H) is a year-long course which explores the physical and chemical properties of matter, developing an understanding of the composition of matter and the changes in composition which matter undergoes. It puts special emphasis on quantitative calculations using models of physical behavior developed through laboratory experience. The main focus of the course is to help students become confident, independent problem solvers. This course is designed to move at a fast pace. Students who do well in this course will be prepared to take AS: Chemistry.

Advanced Studies: Chemistry

Prerequisite: Successful completion of Honors Chemistry with a 90 or higher, or placement into class based on performance on a chemistry placement exam. Enrollment in Accelerated Pre-Calculus or higher is required.

This course will expose students to a fundamental overview of general chemistry topics that are likely to be found at the college level. This course includes components of the Advanced Placement syllabus, including but not limited to stoichiometry, kinetic molecular theory (gases), equilibrium, acid

/ base chemistry (titrations), electrochemistry, and thermodynamics (heat and energetics). The lab component will focus on analysis, and provide real world context for the course.

****Students can take either take this course or Advanced Studies: Organic Chemistry (or both) as their upper level chemistry course****

Advanced Studies: Organic Chemistry

Prerequisite(s): Successful completion of Honors Chemistry with a 90 or higher, or placement into class based on performance on a chemistry placement exam. Enrollment in accelerated pre-calculus or higher is required.

This course will provide a fundamental overview of organic chemistry. Organic molecules are the ones you hear about every day—many of the drugs in commercials, biological molecules like fats, DNA, and proteins, and even the fuel that is pumped into your car. All of these molecules have one thing in common: their structures are based on carbon atoms bonded together in rings or in chains or both. We will study the relationship between structure and function of these organic molecules, reaction energetics, and the synthesis of organic compounds through the study of the major types of organic reactions. The lab component in this course is substantial, and will focus on lab technique and the synthesis and characterization of molecules. Modern spectroscopic techniques will be explored. Finally, the impact of modern organic chemistry on the environment and society will be examined.

Physics

Prerequisite: Algebra II, Algebra II ac, Precalculus, or Precalculus ac.

Students in Algebra II H, Precalculus H, or AP level Math may not take this course.

Grade level: 11 or 12.

Ninth and tenth graders are discouraged from taking this course.

A full-year course designed to introduce students to the concepts of physics without using the high level of mathematical complexity that is involved in most introductory physics courses, such as honors physics. All of the traditional introductory topics are covered: mechanics, motion, gravitation, relativity, sound light, electricity and magnetism. The course prepares students to take a mathematically complex physics course in the future. Labs and demonstrations are a prominent part of the course.

Honors Physics

Prerequisite: 600 Math SAT or 26 Math ACT (minimum).

Corequisite: Math Precalculus ac or higher.

There is an expectation of facility and comfort with geometry, trigonometry, and algebra, without which students could have great difficulty, especially in the second term.

Ninth graders are discouraged from taking this course. Grade Level: 10, 11 or 12.

A more advanced year course whose principal emphasis is the development of the students' understanding of the physical world. Understanding of traditional high school physics topics will be developed through the extensive use of the laboratory and through observation of natural phenomena.

Advanced Studies: Physics C Mechanics

Prerequisite: Honors Physics (with an average of 90 or above), 650 SAT Math score.

Concurrent enrollment in Calculus (AB).

Student must demonstrate excellent work habits. Permission of the department is required.

This course follows the College Entrance Examination Board Advanced Placement syllabi with certain other topics included. Adequate performance on a written examination in the spring may enable the students to earn college credit.

Topics covered: Motion in one dimension, vectors, motion in two dimensions, forces, Newton's Laws of Motion, work and energy, power, conservation of energy, linear momentum, collisions, impulse, statics and equilibrium, rotation, torque, angular momentum, gravitation, oscillations.

Advanced Studies: Physics C Electricity & Magnetism / Mechanics

Prerequisites: Honors Physics with an average of 90 or above and an AP Exam score of 3 or above. 700 Math SAT or 31 Math ACT.

Concurrent enrollment in AP Calculus (BC) OR completion of AP Calculus (AB) with an average of 90 or above OR completion of Precalculus Honors with a year average of 85 or above and concurrent enrollment in AP Calculus (AB).

Student must demonstrate excellent work habits. Permission of the department required.

Mechanics Topics Covered: Motion in one dimension, vectors, motion in two dimensions, forces, Newton's Laws of Motion, work and energy, power, conservation of energy, linear momentum, collisions, impulse, statics and equilibrium, rotation, torque, angular momentum, gravitation, oscillations.

Electricity and Magnetism Topics Covered: Electric charge, electric fields, Coulomb's Law, Gauss' Law, electric potential, capacitance, current and resistance, circuits, Kirchoff's Laws, RC circuits, magnetic fields, Ampere's Law, Faraday's Law, induction, RL circuits.

This course follows the College Entrance Examination Board syllabus.