

JOHN BAPST MEMORIAL HIGH SCHOOL



PROGRAM OF STUDY

This Program of Study describes all the courses taught at John Bapst Memorial High School. Not all courses are offered every year. To know which courses are offered in a given year, please consult the Course List for that year.

English Department	7
English I: Ninth Grade Literature Survey and Composition	8
Honors English I	9
English II: American Literature and Composition	9
Honors English II	10
English III: British and Irish Literature and Composition	10
English IV: World Literature and Composition	11
Eng IV: Creative Writing	12
AP English III: Literature and Composition	12
AP English IV: Language and Composition	14
English IV: Narrative Nonfiction	15
English IV: Argumentative Writing	15
English IV: Fantasy and Fictional Worlds	16
Eng IV: Mock Trial	16
English IV: Personal Narrative	16
English IV: Philosophical Argument	17
English IV: Scientific and Technical Writing	17
English IV: War Literature	17
Fine Arts Department	18
Drawing	19
(Online) Drawing	19
Basic Design	19
Beginning Drama	20
Advanced Drama	20
Digital Photography and Design	20
(Online) Digital Photography and Design	21
Photography I	21
(Online) Photography I	21
Photography II	22
Digital Drawing and Painting	22
Film History and Criticism	22
Illustration	23

Painting	23
Printmaking	23
Sculpture and Ceramics	24
AP Art History	24
Advanced Art	24
AP Studio Art	25
Introduction to Band and Chamber	25
Concert Band	26
Concert Band/Jazz	26
Chamber Ensemble	26
Concert Choir	27
Contemporary Music Workshop	27
Chamber Choir	27
Treble Choir	28
Music Theory (Regular or AP)	28
Introductory Piano Studio	28
Intermediate Piano Studio	29
Advanced Piano Studio (Independent Study)	29
Physical Education and Wellness Department	30
Physical Education	31
Yoga	31
Lifetime Physical Activities	31
Personal Fitness	32
Exercise Science and Sports Leadership	32
Wellness	33
Mathematics Department	34
Algebra I	35
Honors Algebra I	35
Geometry with Trigonometry	35
Honors Geometry with Trigonometry	35
Algebra II	36
Honors Algebra II	36
Precalculus	36

Honors Precalculus	37
Honors Calculus	37
Functions, Statistics, and Trigonometry	37
Honors Statistics	38
AP Calculus-AB	38
AP Calculus-BC	38
AP Statistics	38
Multivariable Calculus	39
Abstract Mathematics	39
Business Finance	39
Modern and Classical Languages	40
Chinese I	41
Chinese II	41
Honors Chinese II	41
Honors Chinese III	42
Honors Chinese IV / AP Chinese	42
French I	43
French II	43
Honors French II	44
Honors French III	44
Honors French IV / AP French	44
Intermediate ESL	45
Advanced ESL	45
Advanced TOEFL PREP	45
Latin I	46
Latin II	46
Honors Latin III	46
Latin IV/ AP Latin	47
Spanish I	47
Spanish II	47
Honors Spanish II	48
Honors Spanish III	48
Honors Spanish IV / AP Spanish Language and Culture	48
AP Spanish Literature	49

Science Department	50
Biology	51
Honors Biology	51
Chemistry	52
Honors Chemistry	52
Physics	52
Honors Physics	53
AP Biology	53
AP Chemistry	54
AP Environmental Science	54
AP Physics	54
Anatomy and Physiology I	55
Anatomy and Physiology II	55
Astronomy	55
Astronomy II	56
Ecology I	56
Ecology II	56
Field Biology	57
Oceanography	57
Marine Biology	57
Social Sciences Department	58
World History	59
American History	59
AP Comparative Government and Politics	59
AP European History	60
AP Human Geography	60
AP Macroeconomics	60
AP Psychology	61
AP United States Government and Politics	61
AP United States History	61
Comparative World Cultures	62
Contemporary Politics	62
Contemporary World Issues	62

Cultural Anthropology	63
Economics	63
International Relations	63
Introduction to Philosophy	64
Model United Nations	64
Engineering and Technology Department	65
Technology I	66
Technology II	66
Robotics I	66
Robotics II	66
Engineering I	67
Engineering II	67
Introduction to Programming	67
2D Graphics Programming	68
3D Graphics Programming	68
Artificial Intelligence	68
AP Computer Science A	69
C Programming	69
Special Topics	70
SAT Prep	70

English Department

Every course in John Bapst Memorial High School's English Program of Study is both a reading and writing course, the goals of which are to prepare students for college level work and to nurture in them the lifelong habits of mind—engagement, openness, flexibility, curiosity, persistence, responsibility, critical thinking, metacognition, creativity—that will make them effective citizens and lifelong learners with an appreciation of reading and writing. In the course of their studies students expand their vocabulary through challenging texts, learn the historical and cultural contexts of their readings, and develop fluency with the idiom of literature and composition discussion. In their eleventh grade year, students may choose between English III: Literature and Composition or Advanced Placement English Literature and Composition, in the twelfth grade year between English IV: Literature, Language, and Composition or Advanced Placement English Language and Composition, and English IV: Creative Writing.. The AP courses require a B average, a demonstrated commitment to classwork and class participation, and the recommendation of the student's current English teacher; however, the English Department does not offer these choices as lesser or greater challenges.

English Literature in all its great national traditions and in all its great forms—poetry, short fiction, plays, novels, speeches, and nonfiction (both practical and creative)—is at the heart of the reading, although syllabi often include classics in translation reaching back to the mythologies of ancient cultures and Sophocles' great tragedies. Courses emphasize close reading and analytical-interpretive writing in the persuasive mode; however, teachers encourage the appropriate use of the personal voice, and in every course students write personal essays. To develop their versatility as writers, students compose in the four modes of discourse (description, narration, exposition, and persuasion) and implement a variety of the modes of development (definition, analysis, division and classification, comparison and contrast, cause and effect, process analysis, analysis, argument, and synthesis). Just as students are asked to discern meaning, purpose, and effect in their reading, they are asked to create meaning, purpose, and effect in their writing. Although the larger elements of composition (development, organization, investment, unity, coherence, clarity, and quotation and research integration) figure prominently in writing instruction and evaluation, the mastery of conventions (sentence structure, usage, grammar, mechanics, documentation, and format) is continuously reinforced.

In the ninth grade year, students begin building writing portfolios that follow them through twelfth grade, and in each year students write reflectively about themselves as developing writers. Teachers use a variety of technology tools at the point of instruction and ask students to use that variety of tools themselves in their writing, reading, and oral presentations.

English I: Ninth Grade Literature Survey and Composition

Grade 9; 1 credit

Prerequisite: None

English I is the foundation of literature and composition studies at John Bapst Memorial High School. Because John Bapst's students come from many different schools, their experience with literature and writing varies significantly; therefore, a major goal of Ninth Grade Literature Survey and Composition is to bring all students to a common but substantially higher level of knowledge and skills that prepares them to meet the challenges of the succeeding years. Teachers strive to provide an environment that encourages students to participate and that challenges all students to deepen the levels at which they think and raise the levels at which they speak, read, and write.

The literature of the course is divided into major genre-based units, and through readings, discussions, and writing assignments, students are immersed in the concepts and vocabulary of analysis and interpretation that they will need in their English classes for the following three years. We place specific emphasis on developing their skills of literary analysis because these skills open all literature and because students must learn to interpret literature for themselves rather than look to their teachers for "official" interpretations. Indeed, students in their eleventh and twelfth grade years, whether they take college preparatory English or either of our Advanced Placement courses, must be able to analyze and interpret literature independently and authentically.

In order to develop their analytical skills and the confidence to use them independently, we teach students to be close readers—to develop habits of mind that encourage engagement with the text through consideration of narrative structure, syntax, diction, imagery, tone, and literary and rhetorical devices—as they craft persuasive, text-based, authentic interpretations of literature. Our emphasis on close reading ensures that students will be able to analyze thoughtfully the elements of a work on their way to understanding the complexities of the work as a whole.

In addition, as the foundation of John Bapst's Writing Program, English I emphasizes the primary aspects of composition: the writing process, organization, topic development, use of detail, sentence structure, grammar, usage, and mechanics. Students write in each of the four modes of discourse (description, narration, exposition, and persuasion), and they learn, using full in-text documentation, to integrate quotations from a single primary source into their essays.

Finally, English I introduces students to library skills—the use of standard reference books, the library catalog, and computer-based research—in cooperation with the

librarian; moreover, throughout the year, English I cultivates student technology skills by asking students to implement those skills in their assignments.

Honors English I

Grade 9; 1 credit

Prerequisite: Placement exam

Honors English I is faster paced and features more complex and mature texts than English I. As such, it is geared toward students who are independent readers, ambitious writers, and willing class contributors. These students are ready to hit the ground running with high school level work and expectations.

English II: American Literature and Composition

Grade 10; 1 credit

Prerequisite: English I

English II is a survey course focused on the study of American Literature, a subject that spans nearly five centuries in the written tradition and vastly longer in the oral tradition of America's earliest inhabitants. Inherent to the study of a body of national literature is the study of the society from which the literature emerged; hence, English II is also concerned with the history and culture of the United States and serves, therefore, as a complementary course to American History One and Two.

In the composition component of English II, students study closely all the primary aspects of composition: the writing process, organization, topic development, use of detail, sentence structure, grammar, usage, and mechanics (including MLA format). The primary subjects of composition assignments, however, are American Literature and literary subjects. In the second semester of the course, students learn how to do literary research, and they begin to integrate secondary sources into their analytical essays while learning correct methods of quotation integration and documentation. In cooperation with the library, students learn literary research skills; they make full use of library materials, computer-based resources, databases, independent web sites, and inter-library loan. The substantial composition component of English Two directly reinforces and builds upon the word processing skills students acquire in their required ninth grade Technology course.

Throughout the tenth grade year, students give considerable attention to vocabulary expansion, and they improve oral communication skills through class discussion and oral presentations. Finally, students work in conjunction with the Guidance Office and their English II teachers to prepare for the Preliminary Scholastic Aptitude Test (PSAT).

Honors English II

Grade 10; 1 credit

Prerequisite: Teacher Recommendation

Honors English II is also based in American Literature. It is faster paced and features more complex and [higher level, sophisticated] mature texts than English II. As such, it is geared toward students who are independent readers, ambitious writers, and willing class contributors. These students will be prepared for AP Literature and AP Language as a result of the course work.

English III: British and Irish Literature and Composition

Grade 11; 1 credit

Prerequisite: English II

English Three is a survey of the literature of Great Britain and Ireland from Anglo-Saxon times to the present—a span of 1200 years. Inherent to the study of such an extensive body of literature over so long a time is the study of the language, history, and culture from which that literature emerged; hence, linguistic, historical, and cultural topics are studied as they inform the literature of the various periods.

The composition component of English Three takes as its primary subject the literature and its cultural context, with the general aim of training the student further in all aspects of academic writing and of building on the skills taught in English I and English II. Eleventh grade English students are expected to research broadly in primary and secondary sources and to make extensive, sophisticated use of research in their two major (3000 to 4000 word) research-informed essays. Students will also experience comprehensive correction of their essays and will be encouraged to revise them for additional credit.

Students practice, expand, and refine their literary research skills as they make more extensive, independent use of the John Bapst Memorial High School Library and as they make use of other local libraries, including the University of Maine's Fogler Library.

Throughout the English Three year, students give considerable attention to vocabulary expansion and the improvement of oral communication skills through class discussions and oral presentations. Finally, students work in conjunction with the Guidance Office and their English Three teachers to prepare for and to analyze the results of the PSAT in preparation for the SAT.

English IV: World Literature and Composition

Grade 12; 1 credit

Prerequisite: English III

English IV is a study of World Literature from classical times to the present in which students grapple with the universal themes of human experience—for example, finding and creating meaning and identity, understanding in both personal and universal terms the concept and complexities of love, contending with the ostensible finality of death, determining worth and value, distinguishing appearance from essence and vanity from aspiration, pursuing dreams and goals, and struggling with absurdity and the possibility of meaninglessness. Although teachers enjoy considerable liberty in choosing literature, all students read and study in all the major forms: poetry, drama, short fiction, long fiction, and non-fiction. Viewing and analyzing film as literature is also part of class work. Teachers approach the course in a variety of ways—by theme, by nation, by genre, by world literary movements—but in all cases, as the final course in John Bapst Memorial High School’s English Program, World Literature and Composition is designed to bring to fulfillment the work of the previous years by demanding of students their best work as readers and writers and as classroom participants and oral presenters.

The composition component of the course takes as its primary subject the literature and its cultural context. Students deepen and sharpen their critical abilities through close analysis of individual literary elements (point of view, tone, style, theme, character, symbol, and irony, for example), which they demonstrate regularly in their written work; they then bring these skills to their major papers, which are evaluated by the most exacting standards. Students are also expected to show considerable independence in choosing literature for their major essays, in choosing subjects to write about, and in researching and documenting primary and secondary sources.

The primary resource for vocabulary expansion continues to be the literature; however, primary responsibility for vocabulary expansion falls to the student. For the purpose of improving communication skills, class participation is strongly encouraged and oral presentations are required. Students work extensively with the librarians to enhance research skills and with the Technology Department in the production of their papers. Finally, students work closely with their teachers and the Guidance Department to facilitate the writing of college application essays and resumes.

Eng IV: Creative Writing

Grade 12 (1 credit)

Prerequisite: English III or AP Literature

This is a course designed for students who want to study various forms of poetry and prose (both fiction and nonfiction) with the aim of creating their own pieces. Each unit will take an aspect of storytelling (such as character development, dialogue, description, and figurative expression) and provide the student with examples and models from which to draw inspiration or use for emulation. Students will write short poems and vignettes as well as periodically drafting and revising longer or more finished poems and stories. Students are encouraged to publish these pieces either in the school literary magazine or various online publications.

Texts include an assortment of short works and excerpts from Shakespeare to Updike, Dostoyevsky to Vonnegut, or from Browning to Rodriguez. We also look at chapters from books on craft such as King's *On Writing*, Lamott's *Bird by Bird*, Goldberg's *Writing Down the Bones*, and dozens of others.

AP English III: Literature and Composition

Grade 11; 1 credit

Prerequisites: English II, a 90% average or above in English II, and teacher recommendation

English III: AP Literature and Composition is a challenging course for students ready for college-level engagement with serious literature. All students taking the class are required to take the exam. Students who do well on the exam may receive advanced placement in college or college credits, depending on the college or university they attend. Students taking this class have a sincere interest in literature, are highly self-motivated, and are prepared to participate actively in the most challenging English course we offer to juniors.

Like English III, English III: AP Literature and Composition has its roots in the literature of Great Britain and its colonial descendants, spanning Anglo-Saxon times to the present. But the AP Literature course, versions of which are taken by some half a million students around the world each year, is focused not on British literature but on great literature. Hence readings in the course are eclectic and may include American literature and literature in translation. Inherent to the study of AP Literature is the close examination of how language and literature work; thus, close reading, critical thinking, classroom discussion, and analytical writing form the backbone of the course. Teachers choose works with an eye to depth, complexity, and intellectual challenge—and to preparation for the AP Literature and Composition Exam in May.

English III: AP Literature and Composition devotes significant class time to the discussion and analysis of literature. Students are expected to be active listeners as well as active participants. As in all courses in the department, students also have the opportunity to learn effective speaking skills through a variety of oral presentations. These performances may require memorization; they are designed to enhance awareness of language, appreciation for organization, active listening, and poise.

The composition component of English III: AP Literature and Composition takes thinking as its primary subject. Literature arises from a personal and cultural context, but in its universality invites readers to a conversation about life's deepest questions. With the aims of training the student further in all aspects of academic writing and building on the skills taught in English I and II, AP Literature and Composition teachers design writing assignments that specifically emphasize the skill set needed to perform well in college and on the AP exam.

In English III: AP Literature and Composition, students will continue to write primary source essays, and they will continue cultivating research skills established in English I and English II, making appropriate use of a variety of primary and secondary sources in projects that may require guided or independent research in the service of research-informed essays. In their research-oriented work, students will learn to find, assess, document, and employ both print and electronic media (especially through internet databases like MARVEL, which all students can access both at school and at home). Teachers may guide students to appropriate scholarship, or they may assign independent research; in addition, students may be asked to find print media beyond the offerings of the John Bapst library in places like the University of Maine Fogler Library.

English III: AP Literature and Composition provides specific preparation for the PSAT and the SAT through components in vocabulary building, grammar, timed-writing, and PSAT and SAT practice tests. Additionally, teachers do regular AP exam preparation in the forms of practice tests and timed writings to prepare students for the rigor of the AP testing situation. Finally, teachers work in concert with the Counseling Office to both prepare students for these exams and to reinforce the importance of these exams in the college preparation and application process.

AP English IV: Language and Composition

Grade 12; 1 credit

Prerequisites: English III, 90% Average in English & Teacher Recommendation

Advanced Placement Language and Composition serves those students who intend to pursue advanced placement in college by taking the Advanced Placement Language and Composition Exam. The reading component of the course focuses on the rhetorical principles, strategies, and techniques at work in literature (nonfiction primarily), with the aim of giving students an understanding of the rhetorical and linguistic choices of authors. The writing component seeks to give students extensive practice in the “expository, analytical, argumentative [synthetic, and research-informed] writing that forms the basis of academic and professional writing as well as the personal and reflective writing that fosters the development of writing facility in any context” (The College Board). In preparation for the Advanced Placement Language and Composition Exam, students work extensively with Advanced Placement materials: AP publications, the content of recent AP Exams, and information collected from AP conferences attended by their teachers. Through practice exams, including multiple-choice questions and timed writings, students gain the practical experience needed for the actual Advanced Placement Language and Composition Exam—a rigorous three hour exam through which students may gain advanced placement in college courses and, often, earn college credits.

Students in AP Language and Composition must have a substantial capacity to work independently, for both the reading and writing requirements are intensive. Daily work requires close reading and critical-rhetorical analysis of both nonfiction and imaginative literature from every genre. Students develop awareness of rhetorical strategies and fluency in the idiom of rhetorical and literary analysis. They also gain insight into the complex ways in which language makes meaning, by which arguments are developed, and by which imaginative literature builds upon the ideas and traditions of the past. Disciplined work in AP Language and Composition also aids those students who wish to take the Advanced Placement Literature and Composition Exam but who did not take AP Literature and Composition in eleventh grade. Finally, students pursue writing not only as a means to demonstrate understanding of language and literature but also as a creative, knowledge-engendering mode of thought in itself.

In order to be admitted to AP Language and Composition, students must have a sincere interest in language and literary studies. They must be not only highly self-motivated but also willing to participate in the most challenging classroom environment (class participation figures prominently in their grades) and to meet the most exacting standards in their reading and writing assignments. They also must have maintained a 90% or better average in their eleventh-grade English course and have the recommendation of their instructor. Students who do not meet the grade average requirement may apply for

admission to AP Language and Composition, a process that requires a review of their writing portfolio as well as the recommendation of their English Three instructor. Applications are available from the English Department Chair.

English IV: Narrative Nonfiction

Grade 12 or 11 with permission: ½ credit

Prerequisite: English III, AP Literature

This is a course designed for students who are interested in exploring the ways that a narrative structure might extend beyond fiction. This includes looking at everything from personal narratives and memoir, to magazine articles and narrative journalism, to podcasts, and documentaries. Selected texts may include *An American Childhood*, *Into the Wild*, *Into Thin Air*, *The Things They Carried*, *Blue Highways*, *Travels With Charley*, *Zen and The Art of Motorcycle Maintenance*, *Night*, *The Glass Castle*, *Down and Out in Paris and London*; Articles from the *New Yorker*, *Time* and other magazines; *This American Life*, *Radiolab*, *TED Radio Hour*, *The Moth*. **(This course material has been folded into English IV for 2020-2021 and is no longer offered as a semester class.)**

English IV: Argumentative Writing

Grade 12 or 11 with permission(½ credit)

Prerequisite: English III, AP Literature

This is a course designed for students willing to explore opposing viewpoints in an effort to understand the full breadth of various controversial topics in a civil manner. It will explore methods of both persuasive and logical argumentation through analysis and creation of speech and text. Topics covered in this course may include politics, issues drawn from current events, race, education, identity, cultural mores and practices, the environment, and issues of equality. Selected texts may include *In Cold Blood*, *Silent Spring*, *The Sixth Extinction*, *The Right Stuff*, *Slaughterhouse-Five*, *1984*, *The Beauty Myth*, *The Feminine Mystique*, along with selected essays, articles, speeches, and visual argumentation.

*This course should NOT be in conjunction with AP Language and Composition

**This course would typically be offered Semester 1.*

(This course material has been folded into English IV for 2020-2021 and is no longer offered as a semester class.)

English IV: Fantasy and Fictional Worlds

Grade 12 or 11 with permission (½ credit)

Prerequisite: English III, AP Literature OR English II with teacher recommendation and/ or permission.

This is a course designed for students who wish to read and consider how people create fantasy, science-fiction, and dystopian landscapes and who are interested in investigating their social implications. It will explore common fantasy archetypes, cultural influences, and relevant social commentaries. Selected texts may include *The Handmaid's Tale*, 1984, *Brave New World*, *F451*, *Grendel*, *Anthem*, and *The Hobbit*. **(This course material has been folded into English IV for 2020-2021 and is no longer offered as a semester class.)**

Eng IV: Mock Trial

Grade 12 or 11 with permission (½ credit)

Prerequisite: English III, AP Literature OR English II with teacher recommendation and/ or permission.

This is a course designed for students who are particularly interested in improving their public speaking, textual analysis, and argumentation skills and/or who have an interest in the legal system or legal professions. The class collaborates on a new case each year and competes against other local schools in real courtrooms before real judges.

Texts are primarily the year's case materials, as well as classic examples of legal rhetoric drawn from real life cases, fictional literature, film, and television.

*This course can be offered Semester 1 only.

(This Course will be offered as a club after 2020-2021)

English IV: Personal Narrative

Grade 11, 12; ½ credit (first semester only)

Prerequisite: English III or AP English Literature

Personal Narrative is a required course for Seniors who are NOT taking AP Language. It is offered in the first semester only and the focus will be primarily on non-fiction narratives, introduction to rhetoric, and the college application essay. **(This course material has been folded into English IV and Creative Writing for 2020-2021 and is no longer offered as a semester class.)**

English IV: Philosophical Argument

Grade 11, 12; ½ credit

Prerequisite: English III or AP English Literature

Philosophical Argument is structured around the Socratic question, “What is the best way to live?” Students will examine the various approaches and arguments used by major philosophers from every time period. Students will become familiar with the terminology used in philosophical discourse and develop their own skills for philosophical argumentation. **No longer offered after 2019**

English IV: Scientific and Technical Writing

Grade 11, 12; ½ credit

Prerequisite: English III or AP English Literature

The scientific and technical writing course is designed to instruct and guide students to act as confident communicators who are capable of measuring audience needs and working with subject matter experts to communicate complicated ideas effectively. Building on the concept of audience need assessment and tailored messaging, students will write scientific articles for three separate audiences; design instructions from concept stage to usability testing stage; and address resume structure, organizational documentation, and proposal writing. **No longer offered after 2019**

English IV: War Literature

Grade 11, 12; ½ credit

Prerequisite: English III or AP English Literature

In War Literature students will be reading, writing, and speaking about the literature associated with war, both fiction and non-fiction, prose and poetry. War Literature will explore the effects of war on humanity both on an individual and societal level. **No longer offered after 2019**

Fine Arts Department

The Fine Arts Department of John Bapst Memorial High School provides a quality fine arts curriculum for every student. We immerse our students in a variety of opportunities to study, appreciate and explore artistic endeavors, while also developing their curiosity, critical and creative thinking skills. The curriculum prepares our students for careers and further study in the arts and gives them an avenue for self expression. Our overall goal is to promote a positive learning environment for our students as they seek to develop a life-long love of the arts.

The Fine Arts Department realizes these goals through sequentially structured lessons and demonstrations that build students' knowledge and competence. Lesson criteria as well as performance are used for evaluation and self-assessment. We challenge, nurture and support our students throughout their learning. The Fine Arts department teaches with consideration of each individual's learning style, while also contributing to students' personal development as ethical leaders and responsible citizens in a global community.

Drawing

Grade 9, 10, 11, 12; ½ credit

Prerequisite: none

Drawing is a semester course offered to budding artists as well as the person who thinks they “can’t draw”. The emphasis of this course is to learn a new method of “seeing” while utilizing proportion, contour lines, angles, shading, and observed or imagined perspective and the Elements of Art. Students primarily work in black and white media, including pencil, charcoal and ink. Students produce their own works of art, maintain an artist’s journal, and complete a portfolio. Relevant areas of art history are studied to enhance student projects. Students become familiar with the visual language of art and the practice of aesthetic valuing through critiques. Each student is required to participate in the school art shows.

(Online) Drawing

Grade 10, 11, 12; ½ credit

Prerequisite: Students must have access to reliable internet and a device to view videos and make photographs of their own work. Recommendation from the online drawing teacher is required.

Same course as above; however students will use online technology tools to work through a primarily self-paced sequence of assignments. Demonstrations will be recorded and available to students 24/7. Teacher commentary and teacher/student interaction will be provided through the school’s learning management software. Assignments will mirror those completed in the traditional classroom setting. Students can expect to spend about 3-3.5 hours working on this course each week in addition to a 10 min face-to-face or video chat meeting. Students will be required to attend our winter or spring art show as well.

Basic Design

Grade 9, 10, 11, 12; ½ credit

Prerequisite: Drawing

Basic Design is a semester course. It is the second prerequisite course after students have completed Drawing. This course encourages students to experience life from the point of view of an artist. Students will focus on Color Theory and how to utilize color media in their works, including but not limited to dry pastel, colored pencil, and watercolor. Students will also be introduced to sculptural processes in clay and will understand the firing process of earthenware in the kiln. In addition they will review the eight Elements of Art and be introduced to the Principles of Design (balance, proportion, movement, contrast, pattern, rhythm and repetition, emphasis, variety, harmony and unity) and how

artwork is organized. Students produce their own works of art, maintain an artist's journal, and complete a portfolio. Relevant areas of art history are studied to enhance student projects. Students become familiar with the visual language of art and the practice of aesthetic valuing through critiques. Each student is required to participate in the school art shows.

Beginning Drama

Grade 9, 10, 11, 12; ½ credit (2021/22 school year and beyond) 1 credit (prior to 2021)

Prerequisite: None

Beginning Drama provides opportunities for students to explore acting skills and techniques. This is a class for the budding actor as well as the person who is searching for skills to enable them with enough confidence to speak in front of large groups. Students will be exposed to four major acting venues (Pantomime, Monologues, Improvisation and short Skits) while becoming more aware of how messages are relayed through body movement, facial expression, and vocal delivery. All are meant to teach the student to convey a message and emotion for the audience's reaction, whether in the boardroom or on the stage. Students will also be exposed to at least one professional theatre experience, and will be encouraged to attend more than one we offer as part of the class.

Advanced Drama

Grade 10, 11, 12; 1/2 credit

Prerequisite: Beginning Drama

Advanced Drama is a semester class with the prerequisite of taking Intro to Drama. Advanced Drama will build on improv and auditioning skills, as well as the performance of one-act plays. A portion of the class will focus on the technical aspects behind the scenes (stage managing, sound and lighting in particular). Advanced Drama students will be expected to participate in the Fall Play (generally the first weekend in November).

Digital Photography and Design

Grade 9, 10, 11, 12; ½ credit (last offered 2020/21)

Prerequisites: Drawing

Digital Photography is a semester long course in which students learn how to successfully operate a digital SLR camera in a variety of situations. Students will learn how to adjust camera settings and light sources to produce correct exposures. This course will also teach students how to apply the Elements and Principles of Design to their photographic compositions. Students will also work with professional software to digitally edit and

manipulate their images. It is recommended that a student use his or her own digital SLR for this course. Students are required to maintain a portfolio of works, prepare works for display and to attend that semester's art show.

(Online) Digital Photography and Design

Grade 9, 10, 11, 12; ½ credit (last offered 2020/21)

Prerequisites: Drawing

Same course as above; however students will use online technology tools such as Seesaw (digital portfolio) and Google Classroom to work through a primarily self-paced sequence of assignments. Demonstrations will be recorded and available to students 24/7. Teacher commentary and teacher/student interaction will be provided through the above platforms. Assignments will mirror those completed in the traditional classroom setting. Students can expect to spend about 3-3.5 hours working on this course each week in addition to a 10 min face-to-face meeting. Students will be required to attend our winter or spring art show as well.

Photography I

Grade 9, 10, 11, 12; ½ credit (2021/22 and beyond)

Prerequisites: none

In this course students will use readily available cameras (on smartphones or tablets) to learn how to see as photographers. Concepts explored in this course will be: framing, composition, exposure, lighting, and portraiture. Students will also be introduced to basics editing techniques. In addition to shooting and editing assignments, students will also participate in group critiques. Students are not required to have their own devices, though it is helpful.

(Online) Photography I

Grade 9, 10, 11, 12; ½ credit (2021/22 and beyond)

Prerequisite: Students must have access to reliable internet and an enabled device.

Recommendation from the teacher is required.

Same course as above, but offered 100% online.

Photography II

Grade 9, 10, 11, 12; ½ credit (2021/22 and beyond)

Prerequisites: Photography I

Using Digital Single Lens Reflex cameras students will advance their technical skills and further be able to control exposure and lighting. Concepts explored in this course include: shutter speed, aperture and ISO. Students will also work with studio lighting and more advanced editing techniques. In addition to shooting and editing assignments, students will participate in group critiques.

Digital Drawing and Painting

Grade 9, 10, 11, 12; ½ credit

Prerequisites: Drawing

Students will build their 2-D design skills while also learning how to use digital tools to create their works. The first quarter will be focused on becoming more familiar with the software and tablet by creating a breadth of projects in various styles. In the second quarter students will be encouraged to explore their personal interests in a structured inquiry-based model. Tablets are provided to all students; it is helpful for student to have their own laptops, but not required. Students are required to maintain a portfolio of works, prepare works for display and to attend that semester's art show.

Film History and Criticism

Grade 11, 12; ½ credit (Last offered Spring 2017)

Prerequisite: Demonstrated writing ability

Film history and criticism is a semester course open to students in their junior or senior year. The course will cover the history of film, from magic lanterns in the 17th century to current digital and 3-D developments. The course will examine technical, artistic and cultural aspects of the media. Several films will be watched and analyzed throughout the course. Students break down the multiple facets that contribute to our understanding of a film, including: text (script), execution (filming), setting, music and acting. Students will also look at film criticism to help them form their understanding of the medium.

Illustration

Grade 10, 11, 12; ½ credit

Prerequisites: Drawing and Basic Design

Focus on Children's Book Illustration for 2021/22: This course will be a (re-)introduction to the picture books that formed us when we were children, and a crash course on how to write, illustrate and publish a story inspired by events in the author's life. In our first eight weeks, students will study various genres of story telling for 2-6yr olds and Caldecott award winning books, while also exploring a variety of illustration rules, styles, techniques and possibilities. In our last eight weeks, students will write their own children's book inspired by a story from their own lives, create a dummy book (one a publisher would expect to see/read in the submission for application process), and 2-4 final pages of design in the artist's own style and media choice. Students will be expected to complete their story, their dummy book, and their final page designs to be exhibited at the semi-annual Art Show.

Painting

Grade 10, 11, 12; ½ credit

Prerequisites: Drawing and Basic Design

Painting is a semester course in which the student will explore the various acrylic painting techniques. We will focus primarily on works from life; however the course will not be confined to realism exclusively. Students will study the techniques and styles of important painting periods such as Impressionism, Futurism, Color Field Painting and other 20th century styles. The students will experience techniques used by famous artist such as Vermeer, Michelangelo, van Gogh, Gauguin, Mondrian, and many more. Students will be required to maintain a portfolio in addition to participating in the school art show.

Printmaking

Grade 10, 11, 12; ½ credit

Prerequisites: Drawing and Basic Design

Printmaking is a semester course in which students will learn multiple printmaking techniques including: monoprint, woodcut, linocut, calligraphy, etching and silkscreen. Students will also be instructed in the proper use of a printing press, history of printmaking and the role of printmaking in today's art world. Students will be required to maintain a portfolio in addition to participating in the school art show.

Sculpture and Ceramics

Grade 10, 11, 12; ½ credit

Prerequisites: none as of 2021/22 school year (prior to 2021/22 Drawing and Basic Design were required)

Sculpture is a semester course considering the 3rd dimension of form. Students will be exposed to classical and contemporary sculptors as they create works of art, problem solving the mysteries of that 3rd dimension. Students' work will thoughtfully consider the use of the Principles of Design as well as the techniques and principles behind appropriate media (such as clay, plaster, or soapstone). Students will be required to display their work in the semester art show and complete a portfolio of work they might want to submit when applying to colleges.

AP Art History

Grade 10, 11, 12; 1 Credit

Prerequisite: None

AP Art History is a full year course designed to prepare students for the AP exam administered in May. The course will cover the history of art from the earliest work of prehistory through to contemporary artists and movements. All media (painting, sculpture, architecture, etc.) will be included in this course. Students will become familiar with the work of individual artists as well as the work associated with artistic movements and time periods. Class meetings will include lectures, class discussion and field trips when possible. Occasionally AP practice questions and tests will be given to help students prepare for the exam.

Advanced Art

Grade 10, 11, 12; 1 credit

Prerequisites: Drawing, and Basic Design

Advanced Art is a year long class for the Intermediate or Advanced Artist. It continues to explore the media and ideas presented in Drawing and Basic Design, only in more depth. Students will first concentrate on interpreting the real world first in a media, then will explore the possibilities the media will allow for them when creating a more contemporary/abstract/non-objective work. Most works will be rooted in the student's personal reaction to the world around them through music, art, socialism and politics. In preparation for future endeavors in art, students are to tap-into their creative side and explore visual media and idea relationships, as would the practicing artist. Students will be expected to exhibit in, and attend each semester art show, while compiling work in their portfolio.

AP Studio Art

Grade 11 & 12; 1 credit

Prerequisites: Drawing, Basic Design, Advanced Art & recommendation from the department required

AP Studio Art is a College Board approved studio class. Students should have a well developed portfolio of work before starting this journey. Students have the opportunity to choose their portfolio of study: a DRAWING portfolio (where a student will show their master in drawing, painting, and mark-making skills) or a DESIGN portfolio (where the student will show their mastery in the use of the Principles of Design, computer and photography work). Once the portfolio has been chosen, students will create a body of 24+ works throughout the year. Twelve works will show their Breadth of mastery, through a variety of media and subject matter. Another twelve works in their Concentration section of the portfolio will encompass a theme as well as a measured growth in artistic integrity. The Breadth and the Concentration sections will be submitted online to the College Board. The third section of the exam, the Quality section, will require students to send five of their actual works to the College Board to be assessed (these are returned late summer). Students will be expected to exhibit in and attend each semester's art show, while compiling work in their portfolio, which will be submitted to the College Board for review in May.

Introduction to Band and Chamber

Grade 9, 10, 11, 12; ½ credit

Prerequisite: none

This course is designed both for students without prior musical training and for those who wish to review the fundamentals. Students learn to play a concert band or chamber ensemble instrument, how to read music, to include note recognition as a quick speed and to count with rhythmic language. Students are required to attend all band or chamber performances as part of their skills development and to increase the joy of playing in a musical ensemble. Anyone wishing to study keyboard or guitar must spend half the year studying a brass or woodwind instrument.

Concert Band

Grade 9, 10, 11, 12; ½ credit

Prerequisite: Experience playing a concert band instrument for at least one year; students new to an instrument should sign up for Intro to Concert Band

This course, involving a large instrumental ensemble, is designed for students with at least one year of experience playing a concert band instrument. This course continues to improve performance skills with the use of music theory and muscle memory repetition. Students will learn the language of rhythmically counting as well as increased speed of recognizing notes and fingerings. The wide variety of music enhances the ability to play stylistically, as well as promoting a life-long appreciation for music. Students are required to attend all band performances. Students wishing to study keyboard or guitar must spend half the year learning to play a brass or woodwind instrument.

Concert Band/Jazz

Grade 9, 10, 11, 12; ½ credit

Prerequisite: Audition (requirements subject to change for 2021/22 due to COVID guidelines, contact Jazz instructor for up-to-date information)

This course, involving a small instrumental Jazz Ensemble is offered in conjunction with Concert Band and is designed to challenge the student in the art of improvisation and the style of playing jazz music. Students must be enrolled in Concert Band in order to audition and to participate in Jazz Band. Students are required to attend all Concert Band and Jazz Band performances.

Chamber Ensemble

Grade 9,10,11,12; ¼ or 1/2 credit (depending on student schedule)

Strings Prerequisite: At least one year of private lessons

Wind Players Prerequisite: Audition (requirements subject to change for 2021/22 due to COVID guidelines, contact Chamber instructor for up-to-date information)

Chamber Ensemble as a course is offered as an instrumental ensemble with 2 rehearsals per week 2 – 3 pm, days are determined on a yearly basis. Students perform in the Winter and Spring concerts, as well as other events during the year. The course involves repetition of basic skills, in tune playing and progressive techniques. Focusing on a classical style repertoire, musicians will also be challenged in the art of performing jazz, mariachi, vocal accompaniment, pop and a variety of global cultural music. Chamber Ensemble is also available as an extracurricular activity, though the student will not earn academic credit .

Concert Choir

Grade 9, 10, 11, 12; ½ credit

Prerequisite: none

The John Bapst Concert Choir is the non-auditioned, mixed chorus available to all students enrolled at John Bapst High School. The Concert Choir is a performing arts ensemble that sings choral selections from various time periods, cultures, and styles in support of the educational goals of the ensemble. Class time (rehearsals) will cover topics including but not limited to: vocal technique, group singing technique, music theory, text analysis, expression, diction, and music history in addition to preparing concert repertoire. The Concert Choir experience culminates in performances at the end of each semester, student attendance is required.

Contemporary Music Workshop

Grades 9, 10, 11, 12; ½ credit

Prerequisite: Teacher recommendation

This course involves vocalists and instrumentalists, who will work together exploring contemporary music. They will develop fundamental skills in the art of performance. They will experience new music and material as a group, individually, and through sectional rehearsals.

Chamber Choir

Grade 9, 10, 11, 12; ½ credit

Prerequisite: 1 year of Concert Choir and/or teacher recommendation

The John Bapst Chamber Choir is the select, mixed chorus of John Bapst Memorial High School. Auditions for the Chamber Choir are open to all students who have taken two semesters of Concert Choir or with Mr. Graebert's permission. The Chamber Choir is a performing arts ensemble that sings advanced choral literature from various time periods, cultures, and styles in support of the educational goals of the ensemble. Class time (rehearsals) will cover topics including but not limited to: vocal technique, group singing technique, music theory, text analysis, expression, diction, and music history in addition to preparing concert repertoire. In addition to the mandatory winter and spring concerts, the Chamber Choir may also be asked to participate in other performances as opportunities present themselves.

Treble Choir

Grade 9, 10, 11, 12; ½ credit

Prerequisite: 1 year of Concert Choir and/or teacher recommendation

The John Bapst Treble Choir is the select, sixteen member, soprano and alto chorus of John Bapst Memorial High School. Auditions for the Treble Choir are open on an as-needed basis to all students who sing in the soprano and alto ranges who have taken two semesters of Concert Choir or Chamber Choir, or with Mr. Graebert's permission. The Treble Choir is a performing arts ensemble that sings advanced choral literature from various time periods, cultures, and styles in support of the educational goals of the ensemble. Class time (rehearsals) will cover topics including but not limited to: vocal technique, group singing technique, music theory, text analysis, expression, diction, and music history in addition to preparing concert repertoire. In addition to the mandatory winter and spring concerts, the Treble Choir may also be asked to participate in other performances as opportunities present themselves.

Music Theory (Regular or AP)

Grade 9, 10, 11, 12; 1 credit

Prerequisite: Piano recommended, but not required

This course is designed to give students an understanding of the form and function of music theory. Topics and activities include reading and writing in music notation, ear training, sight-singing, composition, and arranging. Students may opt to take the course at the AP level and if they do so, they will be required to take the exam in the spring. It is recommended (but not required) that students take the Introductory Piano course prior to taking Music Theory

Introductory Piano Studio

Grade 9, 10, 11, 12; ½ credit

Prerequisite: none

This beginner-level course focuses on the basics of piano playing including posture, proper hand technique, reading music notation, and playing developmentally appropriate literature. Assessments will include both written and playing exams. Recommended for students planning to study music theory.

Intermediate Piano Studio

Grade 9, 10, 11, 12; ½ credit

Prerequisite: Introductory Piano Studio or through placement testing

This course is for students who have completed the Introductory Piano course and/or successfully completed the final exam. Intermediate Piano continues to expand on the concepts introduced in the prior course and will improve the student's reading and playing abilities. Assessments will include both written and playing exams.

Advanced Piano Studio (Independent Study)

Grade 9, 10, 11, 12; ½ credit,

Prerequisite: Intermediate Piano Studio or through placement testing

This course is for students who have completed Intermediate Piano and/or successfully completed the final exam for that course. Independent study students will be assigned a time slot and a piano in the piano lab for practice purposes. Repertoire and benchmarks will be determined by mutual agreement between the supervising instructor and the student. Assessments may include written and/or playing exams depending upon student-instructor agreement.

Physical Education and Wellness Department

The Physical Education and Wellness curriculum is intended to help students make choices which foster responsible healthy behaviors through critical thinking, discussions and communication opportunities. The challenge of the Physical Education and Wellness program is to empower students to sustain regular, lifelong physical activity vital to a healthy and fulfilling life.

Physical Education

Grade 9; ½ credit

Prerequisite: None

This course will not be offered beyond 2020-21.

Physical Education is offered in the 9th grade year. Physical Education provides students with knowledge and skills that can be used in lifelong activities and physical fitness throughout their lives. A positive sense of self is of great importance in young people, and the Physical Education Department strives to foster an atmosphere of positive attitudes and acceptance, no matter the level of an individual student's skills. Through lifetime activities our program focuses on improving student self-esteem, attaining better wellness, becoming less susceptible to stress and increasing the quality of life. The program instills in students the basic human values of fair play, self-esteem, self-confidence and respect.

Yoga

Grade: 9, 10, 11, 12, ½ credit

Prerequisite: None

The Yoga course is designed to safely introduce students to the basic postures, breathing techniques, and relaxation methods of yoga. Students will begin to experience the benefits of stretching, moving and breathing freely as they relieve built up stress, learn to relax, and ultimately get more out of day-to-day life. The aim of this course is to promote vibrant health and to tap the body's latent energy reserves. Students will earn ½ credit for this course.

Lifetime Physical Activities

Grade: 9, 10, 11, 12, ½ credit

Prerequisite: None

The Lifetime Physical Activities course provides students with knowledge and skills that can be used in lifelong activities and physical fitness throughout their lives. A positive sense of self is of great importance in young people, and the Physical Education Department strives to foster an atmosphere of positive attitudes and acceptance, no matter the level of an individual student's skills. Students will design and implement their own fitness regimen by engaging in a variety of lifetime activities. Students will keep a portfolio of all their activities and will self-evaluate progress towards their personal goals. Through lifetime activities our program focuses on improving student self-esteem, attaining better wellness, becoming less susceptible to stress and increasing the quality of life. The program's goal is to instill in students the basic human value of fair play, self-esteem, self-confidence and respect. Students will earn ½ credit for this course.

Personal Fitness

Grade: 10, 11, and 12, ½ credit

Prerequisite: Yoga - ½ credit OR Lifetime Physical Activities - ½ credit

The Personal Fitness course is designed for students of all ability levels looking to enhance their personal fitness and well-being through exercise. This course will allow students to take an active role in improving their physical fitness. Students will design a personal fitness program based on their individual goals. Students will keep a portfolio of all activities and will self-evaluate progress towards their personal goals. Students will participate in activities that help maintain and build each aspect of fitness. Students will learn how to use a variety of fitness equipment safely and effectively. Activities include: weight lifting/resistance training, cardiovascular training, balance/coordination, agility training, plyometrics, calisthenics, interval training, as well as other fitness enhancing activities. This course will also include instructions in nutrition and injury prevention for active individuals. This course will not include team sports. Students will earn ½ credit for this course.

Exercise Science and Sports Leadership

Grade: 11, 12, ½ credit

Prerequisite: Students must have earned 1 credit in Physical Education.

(Yoga- ½ credit, Lifetime Physical Activities-½ credit, or Personal Fitness ½- credit)

The Exercise Science and Sports Leadership course is designed for junior or senior students who are interested in a career in exercise science and sports studies. Students will explore many topics related to exercise science and sport. This course will provide a better overall knowledge of the field to find the area of exercise science that interests them. Additionally, a “Special Permission” designation is reserved for a student who wishes to participate in physical activity that extends beyond the required credit in the physical education curriculum. These students will be responsible for a variety of tasks including classroom setup and breakdown, fitness testing, and guiding small sections within activity units. Students are expected to model characteristics of leadership, responsibility, independence, positive moral, sportsmanship, and ethical behavior. Students must apply and will be required to meet with the chair of the Physical Education and Wellness Department to obtain an application that details the expected requirements and responsibilities of this course. Completed applications will be considered by the department. Students wishing to pursue a career in teaching, coaching or in the field of health, wellness and/or fitness are encouraged to make an application. Students will earn ½ credit for this course.

Wellness

Grade 9, ½ credit

Prerequisite: None

The Wellness course is designed to address a number of developmentally appropriate topics that focus on coping skills and strategies to better equip students to meet the challenges they will face both in and out of school. Topics will include achieving psychological wellness, self-esteem, decision-making, refusal skills, stress assessment and management, suicide and promoting healthy relationships, nutrition, substance abuse and addictive behaviors and certification in the American Heart Association Heartsaver course. This course is a semester course in which students will earn ½ credit toward their Health requirement for graduation.

Mathematics Department

The courses offered by the Mathematics Department encourage students to become more confident, persistent problem solvers and creative thinkers. Students investigate topics using the “Fantastic Four”: solving mathematical problems I) graphically, II) algebraically, III) using tables and numbers, and IV) then explaining their reason verbally.

The Mathematics Department takes time to ensure that students are placed in appropriate classes. Entering Freshmen and International students take a placement exam to determine which class would be appropriate for their first year at JBMHS. That could be one of two levels of Algebra I, or Geometry, Honors Algebra II, or even Honors Precalculus. There are multiple levels of each course to cater to different learning needs, our master schedule allows students flexibility to move to a different level of a math class. The course of study typically culminates in one of several courses, FST (Functions, Statistics, and Trigonometry), Precalculus, Honors Calculus, Honors Statistics or an AP Course. We offer AP Calculus AB, AP Calculus BC, and AP Statistics. We have added Multivariable Calculus for those students who are ready to move beyond AP Calculus.

At all levels at John Bapst, problem solving skills and technology skills each plays an important role. The appropriate use of technology is emphasized so that students may explore mathematical concepts more fully. Exams are often given with a calculator active as well as a non-calculator portion. The department expects students to acquire a solid mathematical background that will allow them to be successful in each successive math course and be prepared for college.

Algebra I

Grade 9; 1 credit

Prerequisite: none

Algebra I introduces the student to the use of symbolic notation and mathematical modeling in problem solving. The major topics covered include simplifying algebraic expressions, solving and graphing equations and inequalities, functions, and data analysis.

Algebra I is offered both as a 1 year course or as a 2 year sequence (Algebra I, Part A and Algebra I, Part B).

Honors Algebra I

Grade 9; 1 credit

Prerequisite: Admittance by placement test

Students in Honors Algebra I will be introduced to the use of symbolic notation and mathematical modeling in problem solving. The major topics covered include simplifying algebraic expressions, solving and graphing equations and inequalities, functions and data analysis.

Geometry with Trigonometry

Grade 10, (grade 9 by examination); 1 credit

Prerequisite: Algebra I

Geometry introduces the student to the use of inductive and deductive reasoning. The major topics covered include parallel lines, congruent and similar polygons, circles, right triangles, areas and volumes of solids, and coordinate and transformational geometry.

Honors Geometry with Trigonometry

Grade 9 or 10; 1 credit

Prerequisite: placement exam, 90% or higher in Algebra I (corequisite with recommendation from the department), or 90% or higher in Honors Algebra I

Honors Geometry introduces the student to the use of inductive and deductive reasoning. The major topics covered include parallel lines, congruent and similar polygons, circles, right triangles, areas and volumes of solids, and coordinate and transformational geometry. Honors Geometry includes more rigorous proofs and constructions than the regular geometry course.

Algebra II

Grade 11; 1 credit

Prerequisites: Geometry

Algebra Two completes the structure of the real and complex number systems. The major topics covered include mathematical modeling in problem solving and graphing equations and inequalities, a comprehensive study of algebraic functions, and an introduction to logarithmic functions, exponential functions, and discrete math and data analysis.

Honors Algebra II

Grade 10, 11; 1 credit

Prerequisites: 93% average in Geometry (corequisite with recommendation from the department) or 93% average in Honors Geometry

Honors Algebra Two completes the structure of real and complex number systems. The major topics covered include mathematical modeling in problem solving, graphing equations and inequalities, a comprehensive study of algebraic functions, and an introduction to logarithmic functions, exponential functions, discrete math and data analysis. This course is designed for students who excel in mathematics and plan to take Honors Precalculus the following year.

Precalculus

Grade 11, 12; 1 credit

Prerequisites: 85% minimum in Algebra II

Precalculus is designed for students who have completed Algebra Two or Honors Algebra Two and plan to take Honors Calculus or Calculus in college the following year. A comprehensive study of transcendental functions and discrete math and their applications is included.

Honors Precalculus

Grade 11, 12; 1 credit

Prerequisites: 90% average in Honors Algebra II or 90% average in Algebra II (corequisite with recommendation from the department)

Honors Precalculus is taken by students who have completed Honors Algebra II and plan to take AP Calculus or AP Statistics the following year. A comprehensive study of transcendental functions and discrete math and their applications, and an introduction to calculus are included. Solving problems algebraically, numerically, and graphically is the major emphasis of this course.

Honors Calculus

Grade 12; 1 credit

Prerequisite: 90% average in Precalculus (corequisite with recommendation from the department) or 90% average in Honors Precalculus

Calculus is designed for students needing a review of Precalculus topics. Following this review, topics will include differentiation, integration of algebraic functions and transcendental functions, along with applications. This course provides the foundational skills for success in college level calculus.

Functions, Statistics, and Trigonometry

Grade 12; 1 credit

Prerequisites: Algebra II

Functions, Statistics and Trigonometry is designed for students who need review in algebra and geometry. This will be followed by a study of trigonometry, discrete math and statistics. Other topics may vary yearly depending on the background and interests of the students and teacher.

Honors Statistics

Grade 12; 1 credit

Prerequisite: Algebra II or Honors Algebra II

This is an introductory statistics class intended for those students who are interested in Statistics but are not ready for the rigor of AP Statistics.

AP Calculus-AB

Grade 12; 1 credit

Prerequisite: 90% average in Honors Precalculus

Advanced Placement Calculus-AB satisfies all the requirements designed by the College Board and is equivalent to one semester of college level calculus. Students who enroll in this course are required to take the AP Calculus exam in May. The differentiation and integration of algebraic and transcendental functions with applications are the major topics.

AP Calculus-BC

Grade 12; 1 credit

Prerequisite: 93% average in Honors Precalculus

Advanced Placement Calculus-BC satisfies all the requirements designed by the College Board and is equivalent to two semesters of college level calculus. Students who enroll in this course are required to take the AP Calculus exam in May. Upon taking the AP test, they will receive a BC score and an AB subscore. The differentiation and integration of algebraic and transcendental functions with applications, polar and parametric functions, and infinite series are the major topics.

AP Statistics

Grade 11, 12; 1 credit

Prerequisite or corequisite: 90% average in Precalculus or Honors Precalculus or Teacher Recommendation

Advanced Placement Statistics satisfies all the requirements for the curriculum as designed by the College Board and is equivalent to one semester of college level non-calculus-based statistics. Students who enroll in this course are required to take the

AP Statistics exam in May. The four major areas covered by the course are exploring data, planning a study, anticipating patterns, and statistical inference.

Multivariable Calculus

Grade 12; 1 credit

Prerequisite: 90% average in AP Calculus BC

In Multivariable calculus, students will extend what was learned in AB and BC calculus, to see how single-variable calculus generalizes to higher dimensions. Students will study vectors and curves in two- and three-dimensional space, as well as differentiation and integration of multivariable functions.

Abstract Mathematics

Grades 10, 11, 12: 1 Credit (Elective)

Prerequisite: Teacher Recommendation

Introduction to Abstract Mathematics is a logic-and-proofs based math course, drawing material primarily from elementary set theory, number theory, and abstract algebra. In addition to a heavy emphasis on critical thinking and reasoning skills, the course will offer students training in a variety of proof techniques, will help students become comfortable reading and writing mathematics (so has a technical writing component), and will give students critical exposure to the non-computational, narrative side of mathematics.

Business Finance

Grades 11, 12: 1 Credit

Prerequisite: Algebra II, Teacher Recommendation

In this class we will explore a number of important business concepts that relate to how companies operate and control their finances.

Topics include: cash flow management, time value of money (TVM), taxes, insurances, regulations, loans, compound interest, capital purchases, purchasing and inventory, and sales. We will also explore some similar concepts from an individual point of view and how best to manage your money. We will use the graphing calculator and computer software extensively during the year to help us "run the numbers".

Modern and Classical Languages

We believe that the limits of our language are the limits of our world and that our mission is to prepare our students to successfully take their places in the global century. We offer courses that teach the past as well as the present, and address both the cultural and literary heritages of these languages. There is much to learn from other humans in other places as well as other times. Languages help us to better know our own cultural roots and, at the same time, open our minds to other cultures and perspectives.

We know from experience that language learning helps us not only to make connections with global society, but also stimulates critical thinking skills that are vital for success in other areas of the curriculum. Thus it helps us to be better citizens of the world and expands our horizons for future travel, education and career opportunities.

In our language courses, students discover the limits of their native language, expand their worldview, and develop their ability to communicate in both English and a second language. We prepare students for authentic, practical language situations in areas including general culture, history, literature, music, film, and cuisine.

Chinese I

Grade 9, 10, 11, 12; 1 credit

Prerequisite: none

Chinese I is a one-year course in Mandarin designed to teach students to use short sentences, learn words and phrases and simple questions and commands when speaking and writing; understand some ideas and familiar details presented in clear and uncomplicated speech when listening; understand short texts enhanced by visual clues when reading. Chinese is spoken as much as possible in class. Students will learn how to greet, how to introduce, how to talk about contact information, how to express likings/dislikings, how to ask and respond to questions of everyday situations. Students will be exposed to authentic materials to help them better understand and appreciate what they are learning. Computers and the internet will be frequently used for practice and research.

Chinese II

Grade 9, 10, 11, 12; 1 credit

Prerequisite: Chinese I (placement exam required for 9th grade)

Chinese II is a one-year course in Mandarin. Students expand their ability to perform all the functions developed in Chinese I. They also develop the ability to make requests in speaking, listening, reading and writing, such as asking for color preference; express their desire of clothes preference; understand and express important ideas and some detail, such as drinking need, relative location of objects, asking and responding about date, daily routine; describe and compare the housing need in American and Chinese culture. Students use and understand learned expressions, sentences and strings of sentences, questions, and polite commands when speaking and listening; create simple paragraphs when writing; understand important ideas and some details in highly contextualized authentic texts when reading. Students will also be exposed to the culture components involved in each theme. such as birthday food in China, hot water drinking habits, symbolic meaning of the colors, etc.

Honors Chinese II

Grade 9, 10, 11, 12; 1 credit

Prerequisite: Chinese I (placement exam required for 9th grade)

Honor Chinese II is a one-year course in Mandarin. Students expand their ability to perform all the functions developed in Chinese I. They also develop the ability to make requests in speaking, listening, reading and writing, such as asking for color preference; express their desire of clothes preference; understand and express important ideas and some detail, such as drinking need, relative location of objects, asking and responding about date, daily routine; describe and compare the housing need in American and

Chinese culture. Students use and understand learned expressions, sentences and strings of sentences, questions, and polite commands when speaking and listening; create simple paragraphs when writing; understand important ideas and some details in highly contextualized authentic texts when reading. Students will also be exposed to the culture components involved in each theme. such as birthday food in China, hot water drinking habits, symbolic meaning of the colors, etc.

On top of the regular Chinese 2 curriculum, Honor Chinese 2 students will get a chance to deepen their understanding of each section from the exposure of a variety of the learning materials similar to the theme. To enhance students' language proficiency and speed up their learning, not only the frequently used classroom language will be conducted in the target language but also most of the content teaching.

Honors Chinese III

Grade 11, 12; 1 credit

Prerequisite: Chinese I and II (or placement exam)

Honor Chinese III is a one-year course in Mandarin. Students expand their ability to perform all the functions developed in Chinese 1 and 2. They also develop the ability to clarify, ask for and comprehend clarification when speaking or listening, express and understand opinions when reading or writing; narrate and understand narration in the present, past, and future; identify, state and understand feelings and emotions in reading, writing or face-to-face speaking. They can use strings of related sentences when speaking, understand most spoken language when the message is deliberately and carefully conveyed by a speaker accustomed to dealing with learners when listening; create simple paragraphs when writing; acquire knowledge and new information from comprehensive, authentic texts when reading. Since Honors Chinese III is a preparation course for the AP Chinese, typing in Chinese is another skill to be addressed. Students will also acquire more vocabulary and grammar patterns throughout the year. Students will gain some basic knowledge of Chinese poetry and literature. The instruction will be conducted in 80% of Chinese.

Honors Chinese IV / AP Chinese

Grade 11, 12; 1 credit

Prerequisite: Chinese I, II, & Honors Chinese III (or placement exam)

Honor Chinese IV/AP Chinese Language and Culture is a one year course that covers the equivalent of a second-year (and/or fourth-semester) college Chinese course. This course is designed to integrate all the four skills, namely listening, speaking, reading and writing, as required in language learning, through sociocultural context; provide students with varied opportunities to further develop their proficiencies across the three communicative modes - interpersonal (speaking, listening, reading, and writing skills),

interpretive (listening and reading skills), and presentational (speaking and writing skills). The 5 Cs (communication, cultures, connections, comparisons, and communities), as outlined in the Standards for Foreign Language Learning for the 21st Century will be reflected throughout the course. Students in this course learn to appreciate culture through the use of authentic materials, native speakers in the local community, class discussion and cultural comparison. The class is conducted in mostly Chinese (90% or above, except for grammar or confusing project procedure explanation). Learning will happen through plenty of scaffolding experiences, various cooperative learning activities. To meet the needs of different learners, different activities are employed for students to choose (choice boards, online vocabulary learning vs flashcards ...). Basic knowledge of the language, such as grammar, vocabulary, idioms, and expressions is introduced and reinforced throughout the course. By use of Knowledge transfer instead of mechanic drilling, higher level thinking skills are developed. Assignments are on a daily basis, handwriting and computer typing combined. There will be various assessments linked to unit themes, including quizzes, tests, projects, participation in all four skills. Prior to assessments, rubric is provided and explained for clear direction and instruction. Course content comprises themes of students' interests, social issues, current events. Materials are selected from various textbooks, web articles, video clips, photos, etc. that are used mostly by native speakers.

French I

Grade 9, 10, 11, 12; 1 credit

Prerequisite: none

French I builds the foundation for all other French courses and teaches beginning students to speak, write, read, and listen in French. Areas of focus include grammar, vocabulary, phonetics, practical conversation, and general culture and civilization of the Francophone world. The course is conducted in French as much as possible, and increasingly so throughout the year.

French II

Grade 10, 11, 12; 1 credit

Prerequisite: French I (placement exam required for 9th grade)

French II a one-year course for students at John Bapst Memorial High School to be offered to students who have successfully completed French I. French Two aims to strengthen the foundation that students obtain in French I and is designed towards helping students with longer conversational exchanges, writing more complex sentences, and reading for meaning. French is spoken in the classroom as much as possible and its use will increase as we advance through the year. The student will use reasonable accuracy in communication with the teacher and others. Students should be willing to

participate, practice, study and do homework on a regular basis to learn the grammar, structure, tenses and vocabulary of this level.

Honors French II

Grade 9, 10, 11, 12; 1 credit

Prerequisite: Successful completion of French I and teacher recommendation.

This program is mostly similar to French II but students are introduced to more elements of Francophone culture with the study of movies, music activities and readings.

Honors French III

Grade 11, 12; 1 credit

Prerequisite: 90% in French II and teacher recommendation

This course emphasizes speaking, reading, writing and comprehension of the French Language, and is conducted almost entirely in French. Fluency will be promoted through proficiency conversations, which will be based on units of study, incorporating new grammar and vocabulary, and will occur throughout the year. Francophone culture will be included, as well as an introduction to selected longer works of French literature.

Honors French IV / AP French

Grade 12; 1 credit

Prerequisite: 90 % average in Honors French III and teacher recommendation

This course emphasizes a high level of speaking, reading, writing and comprehension of the French Language, and is conducted entirely in French. Fluency will be promoted through in class discussions and oral presentations. The study of cultures from the Francophone world is an essential part of this class. Various classic works of French literature from different time periods are studied, for example *Cyrano de Bergerac*, *Les Contes de la Mère l'Oye*, *Le Comte de Monte-Cristo* and Aimé Césaire's *Une tempête*. The class is organized around the 6 themes of the AP French Language and Culture exam (Global Challenges, Contemporary Life, Personal & Public identities, Science & Technology, Families & Communities, Beauty & Aesthetics). Students in this course have the option of taking it as an Advanced Placement course.

Intermediate ESL

Grade 9, 10, 11, 12; ½ credit

Prerequisite: Oral and Written Interview

Intermediate ESL is a one-semester course designed for English language learners to improve student's English across all four skills (reading, writing, listening, and speaking) to help them succeed in the classroom. Students will review as well as encounter new grammar, read short texts and articles, learn academic vocabulary, and practice listening and speaking in the classroom on a daily basis. Presentations and written assignments are assigned frequently to develop fluency and accuracy. Additionally, class time will include academic support to build skills for students' other academic classes. Daily class participation and readiness is essential to success in this course.

Advanced ESL

Grade 9, 10, 11, 12; 1 credit

Prerequisite: Oral and Written Interview; Intermediate ESL

The Advanced ESL is a one-semester course designed for English language learners to improve mastery of student's English across all four skills: reading, writing, listening, and speaking. Students will learn and apply grammar and structures for more complex writing, read longer texts for analysis, learn academic vocabulary, and practice listening and speaking in the classroom on a daily basis. Formal presentations and written assignments are assigned frequently to develop fluency and accuracy. Additionally, class time will include academic support to build skills for students' other academic classes. Daily class participation and readiness is essential to success in this course.

Advanced TOEFL PREP

English as a Second Language

Grade 12; ½ credit

Prerequisite: Oral and Written Interview; Successful Completion of Workshop II

The Advanced TOEFL Prep class is a one-semester course designed to improve mastery of student's English across all four skills as they relate to the TOEFL exam: reading, writing, listening, and speaking. Students will learn ways to successfully approach each section of the test as well as review pertinent grammatical items as they apply to TOEFL test questions. Additionally, class time will include academic support for students' other academic classes. Daily class participation and readiness is essential to success in this course.

Latin I

Grade 9, 10, 11, 12; 1 credit

Prerequisite: None

Latin One is the first of four courses for students in the Latin curriculum. Attention is given to the study of vocabulary and basic grammar which prepares the students to read and understand Latin. One main goal of all the Latin courses is to read a variety of Latin literature by various authors in order to understand the ancient Romans and also ourselves. To this end, we begin reading adaptations of the authors from the first week. These stories include the foundation myth of Rome, a comedy about twin brothers separated from when they were young and the tale of an opportunistic traitor. The course also includes learning English derivatives from the Latin, Greco-Roman mythology and Roman history from its founding through the early Republic.

Latin II

Grade 9, 10, 11, 12; 1 credit

Prerequisite: Latin I (placement exam required for 9th grade)

Latin II is the second of four courses for students in the Latin curriculum. The course reviews all the elements of Latin I and continues the study of vocabulary and basic grammar as the students read and discuss the Latin which becomes incrementally challenging. Among the stories which we read this year are Pliny's account of the eruption of Mt. Vesuvius, Tacitus on the Great Fire of Rome, which was perhaps started by Nero and Apuleius' re-telling of the myth of Cupid and Psyche. English derivatives, mythology and Roman history through the beginning of the empire are also explored.

Honors Latin III

Grade 11, 12; 1 credit

Prerequisite: 90% in Latin II and teacher recommendation

Latin III will review and strengthen the Latin grammar and syntax of previous years and complete the foundation for reading real Latin. Students read and translate a wide selection of authors. They learn about the rhetorical devices which authors use in their writings to enhance what they are saying. Authors include Caesar, Cicero, Catullus, Ovid, Horace, Vergil and Pliny. The historical period covers from the Gallic Wars (58 BCE) through the second century CE, when the Roman Empire was at its greatest extent.

Latin IV/ AP Latin

Grade 12: 1 credit

Prerequisite: 90% or higher in Latin III

In Advanced Placement Latin students read, translate, understand, analyze and interpret the lines of Vergil's Aeneid and Caesar's De Bello Gallico that are required by the course syllabus. In addition, students will read in English the entire Aeneid and Gallic War. The course includes the study of the cultural, social, and political context of these pieces of literature. Critical appreciation of the Aeneid as poetry also includes learning to read the verses with attention to scansion and phrasing. We also seek to understand the purpose of these authors in writing their accounts as they do.

Spanish I

Grade 9, 10, 11, 12; 1 credit

Prerequisite: None

This exciting course engages students in the fundamentals of Spanish communication in the most common situations (e.g. discussing interests, family, food). Using resources available now through technology, today's students have a chance to immerse themselves in the language as never before. There are on-line resources accompanying our curriculum both for quality feedback on their increasing language skills as well as cultural topics.

Spanish II

Grade 9, 10, 11, 12; 1 credit

Prerequisite: Successful completion of Spanish I (or equivalent test for transfers, native speakers). It is highly recommended that any students taking Spanish 2 have at least a final grade of "C" in Spanish 1.

This continuing course engages students in increased skills of Spanish communication (developing written, spoken, audio comprehension and reading skills) through focus on topics relevant to teens: school, activities, daily routine, shopping, vacation, etc. Students acquire much more vocabulary that allows them to express their ideas with more details. They are also challenged to more critical thinking through reading comprehension, asking/answering questions, conversations with others in the class, and oral presentations, all about a variety of engaging topics.

Among technological resources at this level, students have a chance to record themselves, do on-line group projects (e.g. Día de los Muertos), perform and video skits (both presentational and interactive), make creative projects (some from the past include web pages, newspapers, and others).

Honors Spanish II

Grade 9, 10, 11, 12; 1 credit

Prerequisite: Successful completion of Spanish I and teacher recommendation.

This course covers all the regular Spanish II curriculum; however, because it is a faster pace class, students are exposed to a more in depth thinking of the themes studied and of the usage of the target language. Spanish is used most of the time during the course and students are more immersed in the culture of the countries where the language is spoken.

Honors Spanish III

Grade 11, 12; 1 credit

Prerequisite: 90% in Spanish II and teacher recommendation

This course emphasizes speaking, reading, writing and comprehension of the Spanish language. Through the reading of the works of various authors, the students become better acquainted with the Hispanic culture. These readings also serve as a basis for oral presentations, discussions, and compositions. Students are exposed to authentic resources of the Spanish speaking world giving them the opportunity to experience and apply the target language in real life situations. There is a continual review of grammar throughout the course in a way that engages students and immerses them not only in the language but also in the culture of the many Spanish speaking countries. Each student is assigned one or two countries in order to become an ‘expert ambassador’ who knows about geography, politics, well-known personalities, and cultural aspects of the country or countries he/she represents. The course is conducted in Spanish and students are expected to use Spanish all the time.

Honors Spanish IV / AP Spanish Language and Culture

Grade 12, 1 credit

Prerequisite: 90% or higher in Honors Spanish III and teacher recommendation

Honors Spanish IV (Language and Culture) is a course for advanced students who want to achieve proficiency in speaking, understanding, reading and writing Spanish and to develop an appreciation of the Spanish language and Hispanic culture. It includes literature from Spain and Latin America chosen to promote meaningful conversations through relevant themes. Through authentic resources students gain more advanced skills such as analyzing texts, making cultural comparisons, and using the language to express their opinions. Authentic resources include online texts, audio, and audiovisual as well as traditional print resources (literature, essays, and various articles) with the goal of

providing students a rich, diverse learning experience. Students in this course have the option of taking it as an Advanced Placement course. This course is conducted completely in Spanish.

The class is organized around the 6 fields of the AP Spanish Language and Culture exam (The influence of language and culture, Families in different societies, The influence of beauty and art, Science and technology, Quality of life, Global challenges).

AP Spanish Literature

Grade 12; 1 credit

Prerequisite: 90% average in Spanish IV or teacher recommendation

AP Spanish Literature is a course for advanced students who want to develop their proficiency and their cultural understanding through careful reading and critical analysis of literature written in Spanish. This course explores Spanish, Latin-American, and U.S. Latino authors and their works from the medieval period to present day. This course wouldn't be complete without reading at least some chapters of the signature novel *El Ingenioso Hidalgo don Quijote de la Mancha*. This course makes thematic connections between texts of various genres and historical periods. It also makes interdisciplinary connections to the literature of the Spanish-speaking world through art, music, film, history and other academic disciplines. The course is conducted completely in Spanish.

Science Department

In our increasingly scientific and technological world, students need a strong background in the basic sciences of biology, chemistry and physics in order to be well-prepared for college and to be active and engaged members of today's global society. The John Bapst Science Department provides a complete program of studies in the sciences to meet these needs. Students are required to take a minimum of three laboratory classes, with biology or honors biology and chemistry or honors chemistry being mandatory. Most students round out their study of science with physics or honors physics, which provides for a complete program of college preparation. The application of basic principles to real-world situations is emphasized in each course, which is realized through a comprehensive laboratory program. Even classes not designated as "lab" classes incorporate a hands-on approach and inquiry-based learning. Elective classes in the biological, earth and space sciences allow students to explore areas of personal interest. The Science Department offers Advanced Placement courses in biology, chemistry, physics, and environmental science for students seeking a more rigorous program of studies. Students with exceptional interest in science are encouraged to participate in the STEM Distinguished Graduates Program, which gives the student the opportunity to pursue studies in science, technology and math outside of the regular curriculum.

Biology

Grade 9, 10, 11, 12; 1 credit

Prerequisite: None

Biology is a required, one-year course for 9th grade students. Major units of this course include cellular biology, genetics, evolution, and ecology. The themes of "Form Fits Function," "Unity in Diversity," "Homeostasis," and "Levels of Organization" are woven through the curriculum. Laboratory activities are designed to provide conceptual reviews, basic laboratory skills, and an opportunity to practice methods of science. Because recent and future breakthroughs in biotechnology will require our students to challenge their value systems and ethical standards, they will be required to go beyond simply gaining knowledge of biological concepts. They will practice analyzing, synthesizing, and evaluating that knowledge in order to develop the ability to make wise decisions for themselves, and as contributing members of society.

Honors Biology

Grade 9, 10; 1 credit

Prerequisite: Placement by examination

Honors Biology is a one-year course designed for 9th grade students. The themes of "Form Fits Function," "Emergent Properties," "Unity in Diversity," "Homeostasis," and "Levels of Organization" are woven through the curriculum. Units in this course include: practicing the scientific method, basic chemistry, cellular biology, photosynthesis, cellular respiration, cell reproduction, heredity, genetics, evolution and ecology. Students practice many key scientific skills throughout this course to prepare them for more advanced science courses in high school and beyond, including experimental design, data analysis, communication and collaboration. The role of ethics in science is also discussed. Honors Biology covers more biological science topics in greater depth than the regular Biology course, and has a greater amount of in-depth laboratory investigations.

Chemistry

Grade 10, 11, 12; 1 credit

Prerequisites: Biology and Algebra I

This course introduces the students to the fundamental concepts of chemistry. It strongly emphasizes a kinetic/molecular approach where chemical action is explained in terms of moving molecules and changes in energy levels. The course prepares the student for the further study of chemistry and gives them a "molecular view" of matter. Topics covered include atomic and molecular structure, quantum theory, types of reactions, stoichiometry, energy, periodicity, bonding, kinetic theory, properties of matter, solutions, reaction rates, equilibrium, acids, bases, redox, and some organic chemistry. Laboratory work serves to introduce and reinforce ideas as well as to test both knowledge and skill.

Honors Chemistry

Grade 10, 11, 12; 1 credit

Prerequisite: 90% in Algebra I, Biology with an average of 93%, Honors Biology with an average of 90%, or permission of the instructor

This course introduces the students to the fundamental concepts of chemistry. It strongly emphasizes a kinetic/molecular approach where chemical action is explained in terms of moving molecules and changes in energy levels. The course prepares the student for the further study of chemistry and gives them a "molecular view" of matter. Topics covered include atomic and molecular structure, quantum theory, types of reactions, stoichiometry, energy, periodicity, bonding, kinetic theory, properties of matter, solutions, reaction rates, equilibrium, acids, bases, redox, and some organic chemistry. Laboratory work serves to introduce and reinforce ideas as well as to test both knowledge and skill. A greater depth of coverage, several new topics, as well as a considerably greater amount of reading and student responsibility, distinguish this from the regular chemistry course.

Physics

Grade 11, 12; 1 credit

Prerequisites: Biology, Chemistry, and (may be co-requisite) Algebra II

This course introduces students to the fundamental principles which underlie the physical world. Topics include the scientific method, metrics, kinematics, Newtonian dynamics, energy and momentum, electricity, magnetism, light, optics, and relativity. The focus is on the application of basic principles to solve physical problems. The course also includes an extensive program of laboratory exercises, which will assist the student in the understanding of fundamental physical concepts.

Honors Physics

Grade 11, 12; 1 credit

Prerequisites: Biology, Chemistry; Precalculus or Honors Precalculus (may be a corequisite); a 90% average in prior science courses or recommendation from the department

Honors Physics is a calculus-based introductory course for the student who is willing to accept the challenge of an advanced physics curriculum. The scope of this course is the same as that of the regular physics course; however, the topics are covered in greater depth, and there is a stronger emphasis on mathematical problem solving. Laboratory experiments are much more extensive, with stress on the proper application of the scientific method in the integration of physical events.

AP Biology

Grade 10, 11, 12; 1 credit

Prerequisites: Biology with a grade of 93%, Honors Biology with a grade of 90% or recommendation from the department; Chemistry or Honors Chemistry [may be concurrent]

The Advanced Placement Biology course is designed to be the equivalent of a college introductory biology course usually taken by biology majors during their first year. It aims to provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal with the rapidly changing science of biology. After showing themselves to be qualified on the AP Examination, some students, as college freshmen, are permitted to undertake upper-level courses in biology or to register for courses for which biology is a prerequisite. Other students may have fulfilled a basic requirement for a laboratory-science course and will be able to undertake other courses to pursue their majors.

The growth of biological thought and information is accelerating at an exponential rate, and the integration of this material into a logical, teachable format presents an extraordinary challenge to college and AP teachers alike. The major goal of the AP Biology course is to provide a learning environment that enables students to develop a solid understanding of the principal concepts in biology. The AP Biology course and AP Biology Examination will stress the basic facts and the synthesis of these facts into major concepts and themes.

AP Chemistry

Grade 11, 12; 1 credit

Prerequisites: Chemistry with a grade of 93% or Honors Chemistry with a grade of 90% (or recommendation from the department)

Advanced Placement Chemistry is the equivalent of a general introductory chemistry course at the college level. It fully satisfies the AP Chemistry curriculum requirements stipulated by The College Board. The course includes several laboratory experiments in addition to the ones required in the curriculum and a small amount of time is allotted to examine the questions of research ethics as well as career opportunities in the field of chemistry.

AP Environmental Science

Grade 11, 12; 1 credit

Prerequisite: Biology or Honors Biology, Chemistry or Honors Chemistry, recommendation from a Science teacher.

AP Environmental Science is designed to be the equivalent of an introductory college course in environmental science. The goal of the AP Environmental Science course is to provide students with the scientific concepts, principles, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and anthropogenic, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. Environmental science is interdisciplinary; it embraces a wide variety of topics from different areas of study including earth systems and resources, the living world, population dynamics, land and water use, energy resources and consumption, pollution, and global climate change. The course will consist of lab and computer activities, data collection and analysis, group and individual projects, topic discussions, lecture discussions, video presentations, student presentations, text reading assignments and outdoor field activities.

AP Physics

Grade 11, 12; 1 credit

Prerequisite: Grade of 90% in Physics or Honors Physics courses (or recommendation from the department).

Corequisite: Calculus

Advanced Placement Physics is a calculus-based introductory course for the student who is willing to accept the challenge of an advanced placement physics curriculum. As a first year introductory physics course, the primary purpose of this course is to prepare students to successfully complete the mechanics portion of the AP Physics C test. The

topics in this class are therefore restricted primarily to mechanics (the study of motion), with electricity and magnetism being studied as time allows. A primary focus of the class is the development of strong problem-solving skills in each student. Higher-level mathematical skills on the part of the student are assumed, and calculus is used extensively in the derivation of physical concepts. This class also incorporates an extensive laboratory program, with emphasis on acquiring strong observational and analytical skills.

Anatomy and Physiology I

Grade 11, 12; ½ credit

Prerequisite: Biology or Honors Biology

This one semester advanced course focuses on the anatomy and physiology of humans. The structure and function of the human body is studied using a systems approach. Laboratory investigations compliment the course by including microscopic investigations of histological specimens, physiological experiments, and dissections. In addition, as the structure and function of each organ system is investigated, students will also learn about how disease and disorder can affect the individual systems and human organism as a whole.

Anatomy and Physiology II

Grade 11, 12; ½ credit

Prerequisite: Biology or Honors Biology

This one semester advanced course focuses on the anatomy and physiology of humans. The structure and function of the human body is studied using a systems approach. Laboratory investigations compliment the course by including microscopic investigations of histological specimens, physiological experiments, and dissections. In addition, as the structure and function of each organ system is investigated, students will also learn about how disease and disorder can affect the individual systems and human organism as a whole.

Astronomy

Grade 11, 12; ½ credit

Prerequisite: Credit in Biology

Astronomy I is an independent, one-semester introduction to Astronomy. No prior knowledge is assumed, and a minimal amount of mathematics is used. Topics include the sky, constellations and stars, astronomical observing, planetary orbits, gravitation, black holes, the expanding universe, cosmology, and high-resolution imaging of solar system

objects. Although there are some tests, this course is project-based and attempts to make use of hands-on activities as much as possible.

Astronomy II

Grade 11, 12; ½ credit

Prerequisite: Credit in Biology

Astronomy II is an independent, one-semester introduction to Astronomy that differs from Astronomy I in the topics covered. Astronomy I is not a prerequisite for Astronomy II, and Astronomy I and Astronomy II may be taken sequentially if the student wishes to study astronomy for an entire year. Again, no prior knowledge is assumed, and a minimal amount of math is used. Topics include the celestial sphere, light and telescopes, the lives of stars, the Milky Way, galaxies and galactic evolution, the Big Bang, and a special unit on astronomical imaging and lunar geology. Just as in Astronomy I, the emphasis is upon hands-on exploration of astronomical topics and the course is project-based.

Ecology I

Grade 11, 12; ½ credit

Prerequisite: Biology

This semester advanced biology course provides the student with an overview of ecological science. The topics covered include an introduction to the earth's major terrestrial and aquatic ecosystems, population and community biology, biological diversity and speciation, succession, nutrient cycling, and mathematical modeling statistics. Topics such as evolution, bioethics, and natural resource management will be common threads throughout this course. Students will also complete a long term project involving both laboratory and library research.

Ecology II

Grade 11, 12; ½ credit

Prerequisite: Biology

This course is no longer offered.

Field Biology

Grade 11, 12; ½ credit

Prerequisite: By application. Enrollment is limited to 10 students per year.

Students will spend approximately one week on Mount Desert Rock, located 25 nautical miles offshore from Bar Harbor. The length of stay will be dependent on weather. On the island, most field work will be on land. We will observe from the lighthouse tower and a seal blind within a boathouse. On nice weather days, we will launch small boats to do plankton tows or collect oceanographic data. During the fall semester, students work to analyze data and prepare reports of their findings.

Oceanography

Grade 10, 11, 12; ½ credit (first semester only)

Prerequisite: Biology or Honors Biology

Oceanography is a one semester elective course introducing students to the geology, physics and chemistry of the ocean. This course will cover the following units: the formation of the modern ocean, ocean topography & geology, seawater chemistry, circulation of air & water on Earth, waves and coastlines. Local ocean conditions in the Gulf of Maine, and the impact of humans on the global ocean will be discussed throughout the course. Laboratory activities will reinforce concepts and principles presented.

Marine Biology

Grade 10, 11, 12; ½ credit (second semester only)

Prerequisite: Biology or Honors Biology

Marine biology is a one semester elective course introducing students to the diversity of ocean life, marine ecology, and the scope and impact of human interactions with the oceans. Laboratory activities will reinforce concepts and principles presented. The Oceanography semester elective is recommended, but not required, as a prerequisite.

Social Sciences Department

The department offers a comprehensive college preparatory curriculum in the social sciences, with specific courses in history, economics, geography, government, political science, anthropology, philosophy, and cultural studies. Beyond the specific factual content in these courses, the curriculum is designed to develop students' analytical and critical thinking skills and writing ability in order to prepare them for life in college and beyond. The intent is to engage students in examinations of forces that have shaped our lives so that they may be better informed and more curious about contemporary issues and events. Consistent with John Bapst's mission to foster in students a respect for learning, for themselves, and for others, the department expects students to engage in course work so that they learn to develop and articulate reasoned assessments of our increasingly global world.

Students must earn three social sciences credits in order to graduate, though there is considerable choice in charting a path through the department. Study traditionally begins with two required courses, World History and American History; students learn not only the important content and concepts in these introductory courses, but they are expected to build the foundational skills necessary for continued study in the department. With department approval, students may opt to earn these foundational credits in AP Human Geography (in lieu of World History) and/or AP U.S. History (in lieu of American History). The final credit can be earned in a variety of semester- or year-long courses. Certain students, with approval of the department, may opt to "double-up" by taking an additional social sciences course while also taking either American History or AP U.S. History. The department also offers the opportunity for comprehensive study through the Distinguished Graduate program in Global Studies or Humanities.

World History

Grade 9; 1 credit

Prerequisite: None

This course introduces students to the discipline through an examination of societies around the world from prehistory to the present. Considered a survey course, World History is designed to build skills essential for success in the department and to introduce students to human history around the globe. Although study of specific regions and societies is at the discretion of each teacher and may vary from one class to another, the department utilizes a thematic approach to the course, with all specific content linked to five themes – humans and the environment, social development and distinctions, cultural development and interactions of cultures, economic development and interactions of economic systems, and political development and interactions of political systems.

American History

Grade 10; 1 credit

Prerequisite: World History or AP Human Geography

This course introduces students to the American story from the pre-Columbian period to the present with a special emphasis on understanding how the modern era has been shaped by our past. Students examine the development of the American nation while considering the country's wider role in the world. Considered a survey course, American History is designed to provide a foundation for more specialized study in future courses; thus, the focus for teachers is on depth of understanding over breadth of material covered. Participation in the annual history fair is a requirement for the course.

AP Comparative Government and Politics

Grade 11 or 12; 1 credit

Prerequisites: 90% average in American History or AP United States History and recommendation from the department

This course introduces students to the fundamental concepts used by political scientists to study the processes and outcomes of politics in a variety of countries. Cross-country studies are used to explore differences in processes and policy outcomes and to communicate the importance of global political and economic changes. There are six countries at the core of the AP Comparative Government and Politics curriculum: China, Great Britain, Iran, Mexico, Nigeria, and Russia.

AP European History

Grade 11 or 12; 1 credit

Prerequisites: 90% average in American History or AP United States History and recommendation from the department

This course explores European history chronologically from the Renaissance to the present while focusing on historical understanding, interpretation, and research. The curriculum is designed to build a competent framework for understanding the themes of modern European history and is organized around several guiding principles—the power of the human intellect, the reflection of human activity in popular culture, political organization, diplomacy and negotiation, economic organization, and the evolution of society.

AP Human Geography

Grade 9 (placement exam required) or 11 or 12; 1 credit

Prerequisites: 90% average in American History or AP United States History and recommendation from the department

This course introduces students to a systematic study of patterns and processes that have shaped human understanding, use, and alteration of the Earth's surface. Students employ spatial concepts and landscape analysis to examine human social organization and its environmental consequences. The core concepts are population and migration, culture, political geography, economic development, agriculture, and urban geography. Students also learn about the methods and tools geographers use in practice.

AP Macroeconomics

Grade 11 or 12; 1 credit

Prerequisites: 90% average in American History or AP United States History and recommendation from the department

This course introduces students to the principles that apply to an economic system as a whole. It places particular emphasis on the study of national income and price-level determination. It also develops students' familiarity with economic performance measures, the financial sector, stabilization policies, economic growth, and international economics. Students learn to use graphs, charts, and data to analyze, describe, and explain economic concepts.

AP Psychology

Grade 11 or 12; 1 credit

Prerequisites: 90% average in American History or AP United States History and recommendation from the department

This course introduces students to the science and study of the brain and of human behavior. The equivalent of an entry-level university course, AP Psychology consists of units that include the history of psychology, research methods, brain and sensory anatomy, learning, cognition, developmental psychology, abnormal psychology, social psychology, and treatment of psychological disorders.

AP United States Government and Politics

Grade 11 or 12; 1 credit

Prerequisites: 90% average in American History or AP United States History and recommendation from the department

This course is designed to be an intensive study of the formal and informal structures and roots of government and the processes of the American political system, with an emphasis on modern policymaking and implementation. It includes both the study of general concepts used to interpret U.S. government and politics and the analysis of specific, modern examples. It also requires familiarity with the various institutions, groups, beliefs, and ideas that constitute U.S. government and politics. Students will become familiar with the variety of theoretical perspectives and explanations for various behaviors and outcomes in government and politics. Understanding the relevance and importance of U.S. government and politics to our own lives is vital.

AP United States History

Grade 10, 11, or 12; 1 credit

Prerequisites: 90% average in World History, AP Human Geography, or American History and recommendation from the department

This course examines U.S. history through the study of important events, individuals, developments, and processes in nine historical periods from the pre-Columbian era to the present. The curriculum is designed around seven themes that students use to explore and connect different time periods in U.S. history. Students are expected to develop and use the skills and practices employed by historians.

Comparative World Cultures

Grade 11 or 12; ½ credit

Prerequisite: American History or AP United States History

This interdisciplinary course is designed to increase awareness of ways of life in other parts of the world. The study of social relationships and institutions, ideas and belief systems, religion, literature, and history across cultures allows students to become familiar with diverse societies in order to gain an appreciation of multiculturalism in an increasingly plural world.

Contemporary Politics

Grade 11 or 12; ½ credit

Prerequisite: American History or AP United States History

This course focuses on the fundamental issues in current American politics. Students explore the formal and informal structures of government and the processes of the American political system, with an emphasis on current policymaking and implementation. With a daily look at current events, Contemporary Politics helps students understand the fundamental role and relevance of government in our lives.

Contemporary World Issues

Grade 11 or 12; ½ credit

Prerequisite: American History or AP United States History

This course explores contemporary events from around the globe through historical and cultural perspectives. The goal is for students to better understand the issues and events shaping the modern world. The subject matter changes from one year to the next in order to remain contemporary. The course is organized in four units, each of which focuses on a contemporary issue affecting the world, with an emphasis on issues outside of the United States.

Cultural Anthropology

Grade 11 or 12; ½ credit

Prerequisite: American History or AP United States History

This course introduces students to the discipline in order to help them better understand why people are the way they are and why they do what they do. The goal is to introduce students to the richness of human culture in both the past and the present. Exploring the sub-fields of anthropology, the concept of culture, fieldwork, human adaptive strategies, economic systems, gender, and art, students learn about human diversity and the underlying causes of human cultural variation to better understand and relate to other cultures.

Economics

Grade 11 or 12; ½ credit

Prerequisite: American History or AP United States History

This course is designed to foster an appreciation for economic issues and to provide a solid foundation in economic analysis. It is an introduction to microeconomic and macroeconomic trends with a primary focus on the United States. Students develop a basic understanding of economics, from its basic workings to its importance in daily life. Special attention is paid to contemporary events in American politics and our financial world.

International Relations

Grade 10, 11, or 12; ½ credit (fall semester only)

Prerequisite: World History or AP Human Geography

This course introduces students to the basic principles of international relations. Through a topic-driven curriculum, students explore how states (countries), international organizations, and non-governmental organizations (NGOs) interact with each other to deal with the world's most pressing areas of concern. Topics include economic development, global security, sustainable development, globalization, and conflict resolution.

Introduction to Philosophy

Grade 11 or 12; ½ credit

Prerequisite: American History or AP United States History

This course introduces students to philosophical thinking and the main areas of research in contemporary philosophy. Rather than a comprehensive account of all forms of philosophy, the curriculum focuses on several major topics illustrating how classical and modern thinkers articulate their experiences and the world around them, with attention paid to the history of philosophy and its great thinkers.

Model United Nations

Grade 10, 11, or 12. ½ credit (spring semester only)

Prerequisite: World History or AP Human Geography

This course examines how the United Nations operates through a series of real world simulations on current events. Students learn about research, public speaking, and negotiation. The final project for the course is preparing for and attending the [Maine Model United Nations Conference](#) at the University of Southern Maine. No experience is necessary with Model United Nations to enroll in the course; after the class concludes, students may opt to continue this study by participating in the school's Model UN Club.

Engineering and Technology Department

The courses offered by the Engineering and Technology Department encourage students to become creative problem solvers, and to develop skills and knowledge sets that will prepare them both for college level work, and for work experiences outside of school in the professional world. All classes engage students in a project based learning format, where they have an opportunity to systematically develop creative solutions to unique problems. All extra curricular opportunities offered in this department provide additional support to this aim, and provide students not involved with department courses a chance to explore some of the fields offered here. Along with technology education, computer programming, software engineering, and traditional engineering focused courses, students have a chance to explore these areas with both competitive and non-competitive extra curricular activities in cyber security, 3D printing and design, robotics, coding, and IT support services.

Technology I

Grade 9, 10, 11, 12; ½ credit

Prerequisite: none

This semester-long course is designed to provide students with the basic technology, data awareness, and research skills they will need in school, adult and professional life. In this class students explore technologies that impact our daily life, not only learning about them, but learning how they function and the potential benefits and risks associated with them.

Technology II

Grade 9, 10, 11, 12; ½ credit

Prerequisite: Technology I

This course has as a prerequisite of Technology I. This course is intended for students looking for a strong introduction to technology maintenance and management. Students will explore server and network environments and learn to work in the Linux operating system. Students taking this course will learn methods for system automation, system security methodologies, and software configuration procedures.

Robotics I

Grade 9, 10, 11, 12; ½ credit

Prerequisites: none

This is a project based course, intended to give students with an interest in mechanical or electrical engineering some exposure to the field. Students will design, document and create robots to specific criterion. There will be a strong focus in this course on the physical principles and mathematical underpinnings of design, but also the integration of the physical with the virtual. Students are given the opportunity to program their robots to undertake a series of challenges that grow in increasing complexity.

Robotics II

Grade 9, 10, 11, 12; ½ credit

Prerequisites: Robotics I

This is a project based course that builds on its prerequisite course Robotics I. Students will be expected to solve increasingly complex problems involving environmental feedback and software decision making. As if the pre requisite course, students will design, document, build and program robots in order to solve the increasingly complex problems. There will be a strong focus in this course on creativity in problem solving.

Engineering I

Grade 9, 10, 11, 12; ½ credit

Prerequisites: none

The primary goal of this course is to give students an opportunity to explore the field of engineering. Topics will largely be project based. All projects will involve mathematical and scientific research and planning prior to the creation of a prototype. Projects will be based on Physics principles, and students will work materials to produce both Electrical and Mechanical Engineering oriented projects. Equipment permitting, students may also produce software interfaces for digital hardware.

Engineering II

Grade 9, 10, 11, 12; ½ credit

Prerequisite: Engineering I

The primary goal of this course is to take students further into Engineering. Students having already explored the basic concepts of engineering will, in this course, look more deeply at design, utilizing software tools to assist in implementing their vision into reality. Topics will largely be project based. Projects will be based on physical and/or chemical principles, and students will work in teams to develop their projects.

Introduction to Programming

Grade 9, 10, 11, 12; ½ credit

Prerequisite: Technology I

In this course students will explore computer programming from the position of a novice. There is no programming experience needed prior to taking this course. In this course students will be exposed to basic algorithms, and programming techniques in simple starter languages. This course will prepare students for both AP computer science, and other CS electives.

Course topics include: Program documentation, program control flow, developing algorithms, creation and manipulation of data structures, using references, memory management, and efficient program design. Students will apply each skill in a series of small projects that will be used to construct a framework of understanding that will open them to a wider series of applications and theoretical concepts for later work.

2D Graphics Programming

Grade: 10, 11, 12; ½ credit

Prerequisite: Introduction to Programming

In this course students will explore the fundamentals associated with the creation of two dimensional graphics, and the development of game engines that drive these graphics. Students will produce a basic arcade style video game of their own. Students will study bitmaps, raster graphics, pagination, refresh rates, pixel graphics, scalar vector graphics, animation, game loops, physics engines. Students will apply each skill in a series of small projects that will be used by the end of the semester in a computer game designed and implemented individually.

3D Graphics Programming

Grade: 10, 11, 12; ½ credit

Prerequisite: Introduction to Programming

In this course students will explore the fundamentals associated with the creation of three dimensional graphics, and the development of game engines that drive these graphics. Students will produce a three dimensional game engine and basic game involving models and 3-D graphics. Students will study matrices and matrix translations, 3-D models, shading, projection, clipping, rendering, and animation. Students will apply each skill in a series of small projects that will be used by the end of the semester in a computer game designed and implemented individually.

Artificial Intelligence

Grade 10, 11, 12; ½ credit

Prerequisite: Introduction to Programming

This course has as a prerequisite of C Programming. The intended audience is students looking for a deeper understanding of computer science principles, especially in the area of artificial intelligence, path mapping and game theory. Students in this course will develop their own partially intelligent programs, and develop learning algorithms. This course is not offered every year.

AP Computer Science A

Grade 10, 11, 12; 1 credit

Prerequisite: Introduction to Programming

This full year course will introduce students to the discipline of computer programming. Students must have completed the Introduction to Programming course prior to taking this class. Students taking this course will be well prepared for the AP Computer Science A exam offered in May. Students will dig deeper into computer science principles and algorithms needed for the AP exam. Students will also be exposed to the concept of Object oriented Design. Course topics include core language structures, program flow and logic, algorithm development, introduction to data structures, proper documentation techniques, and graphical game development. The course consists of a series of lectures and small programming projects that will culminate in the creation of a personal computer game by the end of the year.

C Programming

Grade 10, 11, 12; 1/2 credit

Prerequisite: AP Computer Science A

Co-requisite: Algebra II

(This course is no longer offered)

In this course students will dig more deeply into low level programming languages. Students will gain a greater appreciation for the true power a programmer has and a respect for that power. Memory management, complex data structures, efficiency, and sorting are a few of the topics to be covered. This course has as its prerequisite satisfactory completion of the Computer Science A course, or permission of the instructor. This course is a prerequisite to most other advanced programming courses. Course topics include: Program documentation, program control flow, developing algorithms, creation and manipulation of data structures, using references, memory management, and efficient program design. Students will apply each skill in a series of small projects that will be used to construct a framework of understanding that will open them to a wider series of applications and theoretical concepts for later work.

Special Topics

SAT Prep

Grade 10, 11, 12; no credit

Prerequisite: None

This course can be taken during the school day or in an after school seminar. In the 3 weeks before an SAT exam, students will have focused instruction on how to prepare for success on the SAT.