

ACADEMIC Course Catalog

<u>2020</u> 2021



Computer Applications

Assistive Technology Course Code: ~Com130

Description: In the Assistive Technology course, students learn about the basic assistive technology available on a personal computer and their appropriate uses. Basic steps for identification of accessibility range of motion issues, assistive technology devices available on new computers, and various operating systems such as Windows XP and Vista are demonstrated and used. Students also learn about the assistive technology software that best suits their own learning styles and needs and the procedures for finding free software on the Internet.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11, 12 Credits: 1

Excel Only

Course Code: ~Čom140

Description: This is a one-term class in the Computer Applications Department that covers the use and integration of Excel in schoolwork and daily life. Students will work with this program making spreadsheets, charts, calculating financial information, etc. Students will use real data and then integrate skills learned into other classes like math and the sciences.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Keyboarding

Course Code: ~Com120

Description: In this one term course, students improve upon their initial keyboarding skills, based on a short diagnostic evaluation provided in the Mavis Beacon keyboarding program. Students will use the same program to practice keyboarding for approximately twenty minutes per class period, gradually developing their abilities. Students who progress to advanced levels of keyboarding will then engage in transcription and dictation lessons. Each student's progress will be evaluated twice per week and scored for accuracy and adjusted words per minute.

Prerequisites: Permission Required: No

Office Applications

Course Code: ~Com115

Description: The Office Applications curriculum focuses on building and maintaining typing skills with the Mavis Beacon keyboarding program; word processing with Microsoft Word; spreadsheet work with Excel; and slide presentations with PowerPoint. Students type several lessons per week and record their typing accuracy and words per minute information. Writing prompts are supplied to provide the students writing and typing practice in Word. Class lessons for inserting images and tables, cutting and pasting, and using the spell checker and Flesch-Kincaid Readability Statistics are all demonstrated and applied by the instructor. Simple spreadsheets are introduced in Excel and the students create several charts or graphs in this program. They will utilize a variety of life skills, including financing a car, credit card financing, and building a budget in this section of the curriculum. The students are introduced to PowerPoint presentations and are challenged to utilize the advanced tools included in the program. Emphasis on factual information, citation of images, and copyright and fair use practices are also explained.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

PowerPoint

Course Code: ~Com125

Description: Students learn the basics of PowerPoint, as well as some advanced skills. Students will construct several slide presentations that utilize the programs tools. Students have the opportunity to use templates, create master templates, and make a basic design without templates. The instructor will teach animation and transition of the slides. Knowing one's audience is the key to this course, and dictates how a slide presentation is constructed and presented. The students' creations will coordinate with material currently being presented in other class curriculums.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Web Page Design Course Code: ~Com100

Description: In the Web Page Design course, students learn the basics of Web Page Design and HTML code, including: page color, font type and size, tables, navigation links, and image insertion are demonstrated and learned. Students will design a website in HTML, meeting the basic Website Accessibility Guidelines.

Prerequisites: None Permission Required: Yes

Grades: 10, 11,12 Credits: 3

Computer Science

3D Design Software: Introduction

Course Code: ~Csc130

Description: Students start using Tinkercad, 3D design software for beginners, and then progress to Fusion 360, a professional-level software, when they are ready to make more complicated shapes. In three terms, they will progress from the basics of 3D design to more advanced techniques. In this course, they will design and print objects of their own choosing, but they will be encouraged to make one object that could help a staff member on campus (e.g., a visual aid for a classroom, a special container for an unusual tool, etc.).

Prerequisites: None Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

3D Design Software: Short Introduction

Course Code: ~Csc120

Description: Students start using Tinkercad, 3D design software for beginners, and then progress to Fusion 360, a professional-level software, when they are ready to make more complicated shapes. In one term, they will learn the basics of 3D design and 3D print several objects of their choosing.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

3d Design Studio: Individual Selection

Course Code: ~Csc160

Description: Before the course starts, students must select their own 3D design project and receive approval from the teacher of this course, who will gauge whether or not the project can be accomplished in one term by the proposing student. This will allow that each student can hit the ground running on the first day of class so they have the best chance to finish their project in one term.

Prerequisites: Either "3D Design: Short Introduction" or "3D Design: Introduction" Permission Required: Yes

3D Design Studio: Lumigrams

Course Code: ~Csc150

Description: Use 3D design software (Fusion 360), embed your initials in a single 3D object. Called a lumigram. Suppose your initials are AJM. Look at the object from one angle and you see the 'A.' Look at the object from another angle and you see 'J.' Look down upon your object and you see 'M.' Shine lights from different angles to project the different letters on different walls. An object like this is called a "lumigram," which combines the French word "lumiere" (lighting or glow) and the Greek "gram" (something written). This object was first made for the cover of Douglas Hofstadter's Pulitzer Prize winning book, "Godel, Escher, Bach: An Eternal Golden Braid." https://www.amazon.com/Gödel-Escher-Bach-Eternal-Golden/dp/0465026567.

Prerequisites: Either "3D Design: Short Introduction" or "3D Design: Introduction" Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

3D Design Studio: Mobiles

Course Code: ~Csc145

Description: Students will 3D design and print the parts of a multi-tiered mobile. In their construction, they will have to take into account such things as weight, leverage, distance, balance, and symmetry.

Prerequisites: Either "3D Design: Short Introduction" or "3D Design: Introduction" Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

3D Design Studio: Pet Mobility

Course Code: ~Csc140

Description: Students will do research on the needs of mobility in animals. They will seek out and discuss these needs with either an animal shelter or pet owners. If possible, they will select a particular animal to help. If they cannot find a particular animal to help, they will design and 3D print a more general apparatus that can be adapted to animals of different sizes.

Prerequisites: Either "3D Design: Short Introduction" or "3D Design: Introduction" Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

3D Design Studio: Post-Processing Superhero Masks

Course Code: ~Csc155

Description: To make your 3D printed objects look professional, you have to post-process the objects once they are removed from the 3D printer. Learn how to polish, wet sand, and paint the materials used in 3D printers so they lose the subtle lines, have the proper texture, and reveal realistic coloring. During

the first term, students will select a figurine (about 8 inches tall), 3D print it, and then go through the post-processing steps to improve the look of their characters. During the final two terms, students will select a superhero's headgear (Batman's cowl, Kylo Ren's helmet, etc.) and go through the process again. We will download pre-designed superhero headgear and 3D print it. The challenge will be to post-process it so it looks close to what the headgear looks like in the movies.

Prerequisites: Either "3D Design: Short Introduction" or "3D Design: Introduction" Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Animation: Introduction Using Blender

Course Code: ~Csc135

Description: Students use Blender, a professional-level animation suite, to learn the basics of making 3D objects and then rendering them using different lighting and textures. Next, they learn to move the objects to make a true animation with some simple objects. Finally, when students reach a limit of what they can absorb in Blender—because it is a complex program— they will move to another animation program called Alice, which makes it much easier to achieve motion through an underlying system of computer coding. The combination of these two animation programs will provide students a solid introduction to animation.

Prerequisites: None Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

App Creation

Course Code: ~Csc165

Description: Using MIT App Inventor (https://appinventor.mit.edu), in part of the first term, students will make a very simple app for an Android device. The purpose of this first project is to give students experience with every step of the app creation process. During the final two and a half terms, students will carefully plan out an app that can potentially impact people's lives in their community. We will look at a collection of apps that have been created and how these apps help the people in their targeted communities. Then, students will research the needs of their community and find a need that could be helped by the existence of an app. For example, maybe an app can quickly calculate your carbon footprint. Maybe an app can help students who have trouble organizing themselves in a particular way. Some apps might require the use of Artificial Intelligence (AI) software, specifically machine learning, in order to classify images or understand spoken language. The MIT App Inventor has several of these AI modules already incorporated into their app creation process. Finally, students will deploy their app, observe the intended users operating it, listen to their feedback, and make alterations to satisfy the intended users.

Prerequisites: None Permission Required: No

Introduction to Coding with Python

Course Code: ~Csc110

Description: This class is for students with no coding experience who are interested in standard programming languages used by professional programmers. Python is the most popular coding language among computing professionals and the most user friendly of the standard languages. Students will learn to draw precise geometrical shapes, learning or applying their pre-existing knowledge of geometry. They will use their coding skills to recreate famous company logos, fractals, and other interesting shapes. They will also learn the general coding skills of manipulating integers, real numbers (floating point), and strings of characters (text). Time permitting, students will learn some basics of several data structures such as lists and arrays.

Prerequisites: Permission Required: No

Grades: 8,9,10,11,12 Credits: 3

Diversity and Social Justice

Current Events in Social Justice and Diversity/Inclusion Practices

Course Code: ~Div130

Description: This course explores current events post Civil Rights movement that are influential in the advancement of equality for all people, including national security, laws, police enforcement, and corporate & educational policies.

Prerequisites: The Social Construction of Identity (preferred) Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Music in Social Justice

Course Code: ~Div145

Description: Music in Social Justice is open to students interested in how the arts shape their world. Students will study how music can engage and advocate for those on the margins of society, and inspire social justice movements. Tailored to the individual interest in social justice topics of the group, the course will analyze historical and current events as they design a musical movement that can empower a people, group or organization in addressing moral and social problems. Such topics may include racial inequality, women's rights, immigration reform, and institutional ableism. A diverse cultural, philosophical, and theological perspective will be taken by the instructor to help guide the ethical implications pertaining to this subject. Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Social Justice in Film

Course Code: ~Div140

Description: The Social Justice in Film course provides students with the opportunity to examine their social identities, giving consideration to elements such as race, religion, class, and sexuality. Using documentaries and contemporary films, students will explore how they are perceived by individuals and society. The class will analyze the varying privilege and disadvantage related to social group memberships and the historical roots of these systems. This course will allow students to gain a stronger understanding of themselves as individuals and of their peers.

Prerequisites: The Social Construction of Identity (preferred) Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Speak Up!

Course Code: ~Div135

Description: This course focuses on effective and appropriate strategies for addressing prejudice and discrimination in social contexts and ways in which individuals can respectfully voice their perspectives in a globally diverse world.

Prerequisites: The Social Construction of Identity (preferred) Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

The Social Construction of Identity

Course Code: ~Div105

Description: This first course in social justice will increase students' understanding and awareness of social identities and how these identities impact our lives and our perception of others. Students will look at some of the basic concepts of social justice including stereotypes, privilege, oppression and socialization. Each of the subsequent courses will allow students the opportunity to look more deeply at a specific form of oppression and establish strategies for change both individual and collectively.

Prerequisites: Permission Required: No

English

Crafting Digital Writing

Course Code: ~Eng715

Description: Social media continues to play a significant role in our daily lives and its impact on the interconnection of our world extends far beyond the confines of the internet. It is therefore increasingly important for students to know how to write and analyze various digital media content. In this course, students will learn how to write a wide range of online articles including but not limited to blog posts, feature articles, opinion editorials, etc. Students will experiment with creating various forms of digital media such as podcasts, video blogs, and advertisements, as well as, how to analyze and interpret the social media content that surrounds them.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 6

Masterpieces in Fantasy Literature

Course Code: ~Eng320

Description: Despite their wild popularity, fantasy series such as Harry Potter and Game of Thrones are often dismissed as pure entertainment and escapism, rather than as texts worthy of critical discussion. In this course, we will discuss how fantasy, as a genre of the imagination, employs alternate forms of representation, such as the fantastical, estranging, or even impossible, which other genres would not allow. Through novels, short stories, graphic novels, and academic articles, we will examine the literary strategies texts use to represent the world through speculative modes, as well as discuss how we can distinguish fantasy from, or relate it to, other genres such as science fiction, horror, fairy tales, and magical realism. We will explore fantasy's investment in world-building, history, tradition, and categories of identity such as race, class, and gender. Throughout the course, we will consider how fantasy, as a genre, form, and world-view, is well-suited to represent our contemporary reality. Masterpieces of Horror

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 6

Mythology

Course Code: ~Eng710

Description: Love, betrayal, war, vengeance—these themes dominate our books and movies, but they have their origins in the myths, poems, and drama of classical civilizations. This course will study the various ways that classical myths, characters, and stories get reinterpreted and adapted in modern media, including novels, graphic novels, film, and art. The course will focus primarily on Greek and Roman

literature, but may also include myths from other traditions, such as African, Indian, and Asian.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 6

Writing Current Events

Course Code: ~Eng705

Description: This course is focused on writing in response to current events from around the world. Students will engage with a variety topics such as global politics, environmental science, social activism, cultural criticism, and human rights through a variety of media. Students will learn writing as a process, gain a broader sense of social and cultural awareness, and develop their critical thinking and active reading skills through rhetorical analysis and argumentation.

Prerequisites: None Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 6

African-American Literature

Course Code: ~Eng580

Description: In this course, students will experience African-American literature through its many and varied forms. Close readings of classic novelists such as James Baldwin and Zora Neale Hurston may be featured alongside poets like Langston Hughes or Gwendolyn Brooks. Drama, song lyrics, screenplays, and comedy pieces could also be read and analyzed in order to immerse students in the history of the African-American experience.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 6

Comedy Sketches From Pen To Performance

Course Code: ~Eng540

Description: In this playwriting course, students are placed with a writing teacher in order to read and study the works of comedy sketch writers, then compose their own pieces, both individually and in collaboration. Next, students work with a stage performance teacher on producing and performing their plays for the Eagle Hill School community.

Prerequisites: Permission Required: No

I Have a Dream: Political Writing

Course Code: ~Eng665

Description: Why do we write? What authors have inspired us? Many of the books and stories we admire have been conceived during extreme times. To what extent, and in what ways, is the literary imagination conditioned by its social contexts? What is political today? These and other questions form the basis of this course by challenging students to draw on their reading and life experiences to write creatively, analytically and with introspection. Students will critically examine the work of American and international writers who are "political" in different ways. In so doing, they are encouraged to "political writing, assessment will be based on ability to develop skills in order to complete polished writing demonstrating a wide range of genres and audiences; examples may include slam poetry, reflective journal, speech, news article, exegesis of a cartoon or speech, and creative fiction.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 6

Literature and the Law

Course Code: ~Eng217

Description: Literature and the Law explores interpretive practices in literary study through the examination of both fictional texts and legal documents. Students are encouraged to bring traditional literary skills to the reading of the law and to understand the close relationship between legal and literary studies. Students in Literature and the Law commit to participation in the Massachusetts Bar Association Mock Trial program and are expected to participate fully in preparation for the Mock Trial competition in addition to meeting other class requirements.

Prerequisites: Permission Required: Yes

Grades: 8, 9, 10, 11,12 Credits: 6

Masterpieces of Literature: Gothic and the Macabre

Course Code: ~Eng570

Description: In this course, students will investigate the macabre in its many forms throughout literary history. From the classical horror works of authors such as Poe and Lovecraft to more modern masters such as Matheson, Barker, and King, students will explore Gothic and the macabre in its many forms, all the while determining its value and importance in literature. Attention will be paid to supernatural, psychological, and allegorical themes and tropes in such fiction, as well as relevant social and historical background information. The course will center on written fiction, with occasional forays into film and other media.

Prerequisites: Permission Required: No

Reading & Writing: Critical Analysis

Course Code: ~Eng330

Description: This course provides the opportunity to develop writing skills required in postsecondary programs. Students complete essay responses to questions and readings, term and research papers, critiques, literary analysis, and persuasive essays with a focus on academic argument and proper citation. This course may be taken repeatedly; the coursework targets the development of sophisticated reading and writing skills on an individual basis. This course is open to juniors and seniors. Enrolling in this class as a sophomore requires department chair approval.

Prerequisites: Junior or Senior Standing Permission Required: No

Grades: 11,12 Credits: 6

Short Story Masterpieces

Course Code: ~Eng265

Description: A masterful short story challenges readers not only to employ the method of active reading but also lends itself to the practice of "close reading," a skill commonly expected of students reading literature in college. Emphasis is placed upon the identification and analysis of the major literary devices and their importance within the structure of the overall literary work. In addition, students will develop their abilities to thoughtfully answer interpretive questions both verbally and through writing.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 6

The Modern Novel

Course Code: ~Eng210

Description: In this course, students delve into the rich diversity of the modern literary world, from the 20th century to the present. In reading, discussing and writing about the texts chosen for this class, students will explore themes often encountered in post-secondary literature courses while still in high school so an open mind and a measure of maturity are expected on the part of interested students.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 6

Writing and Making Studio

Course Code: ~Eng660

Description: This class brings out the deep connection between the writing process as an iterative

making process that takes place in a studio and the process of making physical objects in a maker space studio. The connecting point between these two endeavors centers on how "rhetorical objects" take on some of the properties of physical objects, as far as how they interact and influence the world. The final project of this class will be both a piece of writing and a physical object that play with and reinforce each other's existence as an "object." Students will engage in writing, making, playing, problem solving, and divergent thinking as they produce and investigate the interplay of these two types of "objects."

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Writing for Publication

Course Code: ~Eng260

Description: Have you started a big story and need time to write, with the guidance of an experienced editor? Do you have a completed manuscript that you'd like to get published, but you know it's rough and you need help with editing and proofreading? Would you like to be able to share your writing with your peers and a supportive teacher, and hear their constructive criticism? Do you have a great idea for an essay, or a group of poems, or a film script, but haven't started turning that idea into reality? If any of these apply to you, Writing for Publication may be your course.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 6

Writing the Research Paper

Course Code: ~Eng255

Description: In this course, students are introduced to research methods, including both library and online database searches. Students prepare one or more research papers, using standard intext citation, bibliographic, and other conventions. Rhetorical techniques and the elements of argument are also reviewed. This course can be taken multiple times.

Prerequisites: Permission Required: No

History

A New Nation: Independence to Reconstruction

Course Code: ~His460

Description: A survey of American history from Independence through the Civil War and Reconstruction.

Prerequisites: Permission Required: No

Grades: 9, 10, 11,12 Credits: 3

Examining Media Bias

Course Code: ~His490

Description: What is Legitimate News? When it comes to the media, everyone has heard of 'fake' news. It is made-up stuff, masterfully manipulated to look like credible journalistic reports that are easily spread online to large audiences willing to believe the fictitious and spread the word. In this one term class students will investigate news stories, looking for the tell-tale signs that the information has been provided for entertainment rather than for informational purposes. Students will explore commonly respected news outlets and acceptable sources for research and learn how to evaluate sources of information.

Prerequisites: Permission Required: No

Grades: 9,10,11,12 Credits: 1

Founding of a Nation: The Earliest Americans to the Revolution

Course Code: ~His455

Description: A survey of American history from the first peopling of the Americas up to the American War of Independence.

Prerequisites: Permission Required: No

Global Economy

Course Code: ~His100

Description: In the Global Economy course students learn, identify, and define economic terms currently in use. They are introduced to major economic practices and globalization and the influences of these concepts are studied. Global banking, investing, and funding organizations such as the World Bank, stock markets, and private organizations are discussed. Foreign policy and its overall political effect is considered as a motivator for local and global economic decisions.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Global Perspectives

Course Code: ~His105

Description: Global Perspectives is a course specifically designed for eighth graders. The class is built is around the following concepts: diversity, tolerance, globalization, and sustainability. The basic ideas of each concept are introduced and then different countries perspectives are woven into the learning experience. Specific information is taken from individual countries and taught as a part of the overall concept. Students are also introduced to major topics in geography and how they influence the lifestyles, decisions, and policy making of different peoples of the world. Students maintain a binder for all the class papers, assignments, and homework. Binders are checked and graded periodically.

Prerequisites: Permission Required: No

Grades: 8 Credits: 6

Government

Course Code: ~His110

Description: The Government course is an introduction to the fundamentals of American government and politics. It is designed to guide students as they consider their relationship to the government of the country in which they live. This course aims to help develop critical and analytical reasoning skills as students evaluate issues and public policies in American politics.

Prerequisites: Permission Required: No

Grades: 11,12 Credits: 8

Growth of a Nation: Age of Industry to the Cold War

Course Code: ~His465

Description: A survey of American history from the period following Reconstruction to the era of the Cold War.

Prerequisites: Permission Required: No

Grades: 9, 10, 11,12 Credits: 3

Moving Toward the Future: The Cold War and Beyond

Course Code: ~His495

Description: This course explores the history of the United States from the beginning of the Cold War through the Civil Rights Movement, the Vietnam Era, and the end of the Cold War.

Prerequisites: Permission Required: No

Grades: 9, 10, 11,12 Credits: 3

Revolutions

Course Code: ~His375

Description: What would it take for a population to rise up against its government, overthrow its leaders and establish a new order? This course is designed for students to analyze and evaluate uprisings that have turned into revolutions that changed the world. The American, French, Chinese, Russian and other Revolutions will be studied with the aim of finding commonalities amongst their causes and their leaders. (The analytical nature of this course makes it more suited for older students with well-developed reasoning skills).

Prerequisites: Permission Required: Yes

Grades: 10, 11,12 Credits: 6

Survey of Belize Course Code: ~His505

Description: In advance of EHS's April 2021 trip, this class will investigate the history, culture, and geography of Belize.

Prerequisites: Permission Required: No

WMD: Minutes to Midnight

Course Code: ~His520

Description: Students will learn about CBRN--Chemical, Biological, Radiological and Nuclear weapons. Origins and the spread of the weapons will be featured along with current levels of oversight and prevention of the weapons. The course addresses international concerns with countries escalating their threats and research along with production of nuclear weapons.

Prerequisites: Permission Required: No

Grades: 9, 10, 11,12 Credits: 1

International Baccalaureate

Biology HL (I) Course Code: ~IB200

Description: Biology is the study of life. The vast diversity of species makes biology both an endless source of fascination and a considerable challenge. Biologists attempt to understand the living world at all levels from the micro to the macro using many different approaches and techniques. Biology is still a young science and great progress is expected in the 21st century. This progress is important at a time of growing pressure on the human population and the environment. By studying biology in the DP students should become aware of how scientists work and communicate with each other. While the scientific method may take on a wide variety of forms, it is the emphasis on a practical approach through experimental work that characterizes the sciences. Teachers provide students with opportunities to design investigations, collect data, develop manipulative skills, analyze results, collaborate with peers and evaluate and communicate their findings. Biology HL is a two year course. This is part one.

Prerequisites: Biology Permission Required: Yes

Grades: 11 Credits: 9

Biology HL (II)

Course Code: ~IB240

Description: Biology is the study of life. The vast diversity of species makes biology both an endless source of fascination and a considerable challenge. Biologists attempt to understand the living world at all levels from the micro to the macro using many different approaches and techniques. Biology is still a young science and great progress is expected in the 21st century. This progress is important at a time of growing pressure on the human population and the environment. By studying biology in the DP students should become aware of how scientists work and communicate with each other. While the scientific method may take on a wide variety of forms, it is the emphasis on a practical approach through experimental work that characterizes the sciences. Teachers provide students with opportunities to design investigations, collect data, develop manipulative skills, analyze results,

collaborate with peers and evaluate and communicate their findings. Biology HL is a two year course. This is part two.

Prerequisites: Biology HL (I) Permission Required: Yes

Grades: 12 Credits: 9

History HL (I)

Course Code: ~IB130

Description: The DP history course is a world history course based on a comparative and multiperspective approach to history. It involves the study of a variety of types of history, including political, economic, social and cultural, and provides a balance of structure and flexibility. The course emphasizes the importance of encouraging students to think historically and to develop historical skills as well as gaining factual knowledge. It puts a premium on developing the skills of critical thinking, and on developing an understanding of multiple interpretations of history. In this way, the course involves a challenging and demanding critical exploration of the past. Teachers explicitly teach thinking and research skills such as comprehension, text analysis, transfer, and use of primary sources. There are six key concepts that have particular prominence throughout the DP history course: change, continuity, causation, consequence, significance and perspectives. History HL is a two year course. This is part one.

Prerequisites: Permission Required: Yes

Grades: 11 Credits: 9

History HL (II)

Course Code: ~IB260

Description: The DP history course is a world history course based on a comparative and multiperspective approach to history. It involves the study of a variety of types of history, including political, economic, social and cultural, and provides a balance of structure and flexibility. The course emphasizes the importance of encouraging students to think historically and to develop historical skills as well as gaining factual knowledge. It puts a premium on developing the skills of critical thinking, and on developing an understanding of multiple interpretations of history. In this way, the course involves a challenging and demanding critical exploration of the past. Teachers explicitly teach thinking and research skills such as comprehension, text analysis, transfer, and use of primary sources. There are six key concepts that have particular prominence throughout the DP history course: change, continuity, causation, consequence, significance and perspectives. History HL is a two year course. This is part two.

Prerequisites: History HL (I) Permission Required: Yes

Grades: 12 Credits: 9

Language and Literature HL (I)

Course Code: ~IB100

Description: The language A: language and literature course aims to develop skills of textual analysis and the understanding that texts, both literary and non-literary, can relate to culturally determined reading practices. The course also encourages students to question the meaning generated by language and texts. An understanding of the ways in which formal elements are used to create meaning in a text is combined with an exploration of how that meaning is affected by reading practices that are culturally defined and by the circumstances of production and reception. The study of literature in translation from other cultures is especially important to IB DP students because it contributes to a global perspective. Texts are chosen from a variety of sources, genres and media. Language and Literature HL is a two year course. This is part one.

Prerequisites: Reading and Writing Critical Analysis Permission Required: Yes

Grades: 11 Credits: 9

Language and Literature HL (II)

Course Code: ~IB270

Description: The language A: language and literature course aims to develop skills of textual analysis and the understanding that texts, both literary and non-literary, can relate to culturally determined reading practices. The course also encourages students to question the meaning generated by language and texts. An understanding of the ways in which formal elements are used to create meaning in a text is combined with an exploration of how that meaning is affected by reading practices that are culturally defined and by the circumstances of production and reception. The study of literature in translation from other cultures is especially important to IB DP students because it contributes to a global perspective. Texts are chosen from a variety of sources, genres and media. Language and Literature HL is a two year course. This is part two.

Prerequisites: Language and Literature HL (I) Permission Required: Yes

Grades: 12 Credits: 9

Mathematics: Analysis and Approaches SL (I)

Course Code: ~IB360

Description: Mathematics: Analysis and approaches is designed for students who wish to study mathematics as a subject in its own right or to pursue their interests in areas related to mathematics. This course has a strong emphasis on calculus and on algebraic, graphical and numerical approaches. Students will develop strong skills in mathematical thinking and become fluent in the construction of mathematical arguments. It will appeal to students who are interested in exploring real and abstract applications of mathematical concepts. They will enjoy problem solving and generalization. This course is suitable for students who may go on to further study in subjects that have a significant level mathematics content, for example mathematics itself, engineering, physical sciences or economics.

Prerequisites:

Permission Required: Yes

Grades: 11 Credits: 9

Mathematics: Analysis and approaches SL (II)

Course Code: ~IB370

Description: Mathematics: Analysis and approaches is designed for students who wish to study mathematics as a subject in its own right or to pursue their interests in areas related to mathematics. This course has a strong emphasis on calculus and on algebraic, graphical and numerical approaches. Students will develop strong skills in mathematical thinking and become fluent in the construction of mathematical arguments. It will appeal to students who are interested in exploring real and abstract applications of mathematical concepts. They will enjoy problem solving and generalization. This course is suitable for students who may go on to further study in subjects that have a significant level mathematics content, for example mathematics itself, engineering, physical sciences or economics.

Prerequisites: Mathematics: Analysis and approaches SL (I) Permission Required: Yes

Grades: 12 Credits: 9

Music SL (I)

Course Code: ~IB190

Description: The IB Diploma Programme music course seeks to develop students' knowledge and potential as musicians, both personally and collaboratively. IB Diploma Programme music students are required to study musical perception and actively listen to a wide range of music from different parts of the world, musical cultures and time periods. They also develop aural perception and understanding of music by learning about musical elements, including form and structure, notations, musical terminology, and context. Through the course of study, students become aware of how musicians work and communicate. Music SL is a two year course. This is part one.

Prerequisites: Permission Required: Yes

Grades: 11 Credits: 9

Music SL (II)

Course Code: ~IB300

Description: The IB Diploma Programme music course seeks to develop students' knowledge and potential as musicians, both personally and collaboratively. IB Diploma Programme music students are required to study musical perception and actively listen to a wide range of music from different parts of the world, musical cultures and time periods. They also develop aural perception and understanding of music by learning about musical elements, including form and structure, notations, musical terminology, and context. Through the course of study, students become aware of how musicians work and communicate. Music SL is a two year course. This is part two.

Prerequisites: Music SL (I) Permission Required: Yes

Grades: 12 Credits: 9

Spanish ab initio (I)

Course Code: ~IB110

Description: The IB DP language ab initio course is designed to provide students with the necessary skills and intercultural understanding to enable them to communicate successfully in an environment where the language studied is spoken. This process encourages the learner to go beyond the confines of the classroom, expanding an awareness of the world and fostering respect for cultural diversity. The language ab initio course develops students' linguistic abilities through the development of receptive, productive and interactive skills by providing them opportunities to respond and interact appropriately in a defined range of everyday situations. Language ab initio is available at standard level only. Spanish ab initio is a two year course. This is part one.

Prerequisites: Permission Required: Yes

Grades: 11 Credits: 9

Spanish ab initio (II)

Course Code: ~IB310

Description: The IB DP language ab initio course is designed to provide students with the necessary skills and intercultural understanding to enable them to communicate successfully in an environment where the language studied is spoken. This process encourages the learner to go beyond the confines of the classroom, expanding an awareness of the world and fostering respect for cultural diversity. The language ab initio course develops students' linguistic abilities through the development of receptive, productive and interactive skills by providing them opportunities to respond and interact appropriately in a defined range of everyday situations. Language ab initio is available at standard level only. Spanish ab initio is a two year course. This is part two.

Prerequisites: Spanish ab initio (I) Permission Required: Yes

Grades: 12 Credits: 9

Spanish SL (I)

Course Code: ~IB120

Description: The IB DP language B course provides students with the opportunity to acquire or develop an additional language and to promote an understanding of other cultures through the study of language. Language B is designed for students who possess a degree of knowledge and experience in the target language. High performing standard level students should be able to follow university courses in other disciplines in the language B that is studied. Spanish SL is a two year course. This is part one.

Prerequisites: Spanish III Permission Required: Yes

Grades: 11 Credits: 9

Spanish SL (II)

Course Code: ~IB320

Description: The IB DP language B course provides students with the opportunity to acquire or develop an additional language and to promote an understanding of other cultures through the study of language. Language B is designed for students who possess a degree of knowledge and experience in the target language. High performing standard level students should be able to follow university courses in other disciplines in the language B that is studied. Spanish SL is a two year course. This is part two.

Prerequisites: Spanish SL (I) Permission Required: Yes

Grades: 12 Credits: 9

Theory of Knowledge (I)

Course Code: ~IB170

Description: Theory of knowledge (TOK) is a course about critical thinking and inquiring into the process of knowing, rather than about learning a specific body of knowledge. It plays a special role in the DP by providing an opportunity for students to reflect on the nature of knowledge, to make connections between areas of knowledge and to become aware of their own perspectives and those of the various groups whose knowledge they share. It is a core element undertaken by all DP students, and schools are required to devote at least 100 hours of class time to the course. The overall aim of TOK is to encourage students to formulate answers to the question "how do you know?" in a variety of contexts, and to see the value of that question. This allows students to develop an enduring fascination with the richness of knowledge. Theory of knowledge is a two year course. This is part one.

Prerequisites: Permission Required: Yes

Grades: 11 Credits: 3

Theory of Knowledge (II)

Course Code: ~IB330

Description: Theory of knowledge (TOK) is a course about critical thinking and inquiring into the process of knowing, rather than about learning a specific body of knowledge. It plays a special role in the DP by providing an opportunity for students to reflect on the nature of knowledge, to make connections between areas of knowledge and to become aware of their own perspectives and those of the various groups whose knowledge they share. It is a core element undertaken by all DP students, and

schools are required to devote at least 100 hours of class time to the course. The overall aim of TOK is to encourage students to formulate answers to the question "how do you know?" in a variety of contexts, and to see the value of that question. This allows students to develop an enduring fascination with the richness of knowledge. Theory of knowledge is a two year course. This is part two.

Prerequisites: Theory of Knowledge (I) Permission Required: Yes

Grades: 12 Credits: 3

Visual Arts SL (I)

Course Code: ~IB160

Description: The IB Diploma Programme visual arts course encourages students to challenge their own creative and cultural expectations and boundaries. It is a thought-provoking course in which students develop analytical skills in problem-solving and divergent thinking, while working towards technical proficiency and confidence as art-makers. In addition to exploring and comparing visual arts from different perspectives and in different contexts, students are expected to engage in, experiment with and critically reflect upon a wide range of contemporary practices and media. The course is designed for students who want to go on to further study of visual arts in higher education as well as for those who are seeking lifelong enrichment through visual arts. Visual Arts SL is a two year course. This is part one.

Prerequisites: Permission Required: Yes

Grades: 11 Credits: 9

Life Skills

College Orientation

Course Code: ~Lif100

Description: The College Orientation class is a required course designed to help students understand their learning styles and effective learning strategies in order to prepare them for college and potential support and accommodations they may need. Students are exposed to various postsecondary options. This is done through discussions, visits from college representatives, and various college search mechanisms. The class also helps students become more prepared for the college process through college visits, mock interviews, and application completion assistance.

Prerequisites: Permission Required: No

Grades: 11,12 Credits: 3

The Personal Essay

Course Code: ~Lif140

Description: In this one-term writing class for seniors, students will work with a writing teacher or college counselor to revise and further develop personal essays for college applications. Emphasis will be placed on developing essays that demonstrate the uniqueness of the applicant with college admission officers as the intended audience. It is expected that students will have completed a draft of their essays before taking the class.

Prerequisites: Permission Required: No

Grades: 12 Credits: 1

Mathematics

Algebra I

Course Code: ~Mat100

Description: The Algebra I course covers all aspects of understanding variables and how they are utilized to solve problems in many different life activities. Among the topics covered are operations with monomials and polynomials, solving equations, solving inequalities, factoring, graphing linear equations and solving systems of equations. Word problems are presented with each concept. Students are frequently asked to work on group projects and in peer tutoring exercises.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 8

Algebra II

Course Code: ~Mat105

Description: Advanced concepts utilizing both algebra and geometry skills are taught in Algebra II. Systems of equations, functions and graphs, rational expressions, complex numbers, the quadratic formula, polynomial functions, and basic trigonometry are covered. The graphing calculator and its functions are introduced in this course. Students learn to solve complex word problems relating to science and business, with the assistance of the graphing calculator.

Prerequisites: Permission Required: No

Basic Math

Course Code: ~Mat110

Description: The Basic Math course develops skills in fractions, decimals, measurement, and factoring (greatest common factor, least common multiple, prime numbers), as well as the terminology of factoring. Skills in conversion of measurements, both standard and metric, are also developed.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 8

Calculus

Course Code: ~Mat115

Description: The Calculus course focuses primarily on differential calculus. Topics covered are limits, continuity, derivatives, rules of derivatives, and their applications. Some integral calculus will be covered if time permits. Word problems are presented relating to such fields as physics, geology, architecture, chemistry, and business. Students utilize a graphing calculator in this class.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11, 12 Credits: 8

Consumer Math

Course Code: ~Mat120

Description: In the Consumer Math course, students learn how to apply the basic mathematics skills needed to survive in today's world. Topics such as money, balancing a checkbook, finding discounts, estimation, percents, shopping, and budgeting are covered. Students also discover how to measure distance, liquid, mass, and calculate metric conversions. Students solve word problems and develop long-term projects related to real-life situations. Calculators and many different measuring tools are employed in this course.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 8

Contemporary Mathematics Course Code: ~Mat210

Description: The Contemporary Mathematics course is designed to survey some important ideas and practical applications in mathematics. Topics such as problem solving, finance, measurement, number concepts, art and math, and mathematical modeling are covered. Students will develop critical thinking and problem solving strategies, and learn about the use of various technologies such as calculators and computers.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 8

Cryptology

Course Code: ~Mat215

Description: Cryptology is a course in making and breaking codes. We will study the history of cryptography, encryption and decryption, and the security of specific types of ciphers. If you enjoy the challenge of solving puzzles or want to one day be a secret agent, this might be the course for you.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Fraction Fluency

Course Code: ~Mat235

Description: Fraction Fluency is a course tailored to meet the needs of an individual student based upon his or her experience and skill in the area of fractions. The mathematical skills targeted range from simplifying fractions, to practicing the four operations of addition, subtraction, multiplication, and division, to solving algebraic expressions and equations involving fractions.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Fundamentals of Advanced Mathematics

Course Code: ~Mat125

Description: The primary objective of the Fundamentals of Advanced Mathematics course is to assist students with mastering algebra and geometry topics and then apply these concepts to reallife situations. Some of the specific topics include: solving polynomial equations using the quadratic formula, the Pythagorean Theorem, basic trigonometric functions, and solving right triangles. Fundamentals of Advanced Mathematics is recommended for students who have completed Algebra I, Algebra II, and Geometry and need reinforcement of basic algebra and geometry skills before taking Pre-calculus.

Prerequisites: Permission Required: No

Fundamentals of Geometry

Course Code: ~Mat130

Description: Fundamentals of Geometry emphasizes the practical application of deductive reasoning in conjunction with basic geometry theorems to solve problems including: parallel and perpendicular lines, angles, circles, polygons, and triangles.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 8

Geometry

Course Code: ~Mat135

Description: The Geometry class emphasizes the understanding and interrelationships of geometry concepts, vocabulary, postulates, and theorems. These are presented in a multimodal manner, allowing the students to learn through visual, auditory, kinesthetic and hands-on activities. Topics covered include but are not limited to: lines, line segments, rays, angles, line segment and angle properties, polygons, perimeter, circumference, area, and planes. In addition, students develop their diagram-drawing skills, logical thinking abilities and organizational skills.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 8

GO

Course Code: ~Mat138

Description: Go is a fascinating board game that originated in China more than 4,000 years ago. It is played today by hundred millions of people, including thousands in the United States. In Japan, Korea, China, and Taiwan, it is far more popular than chess is in the West. Like the Eastern martial arts, Go can teach concentration, balance, and discipline. Each person's style of play reflects his or her personality and can serve as a medium for self-reflection. The most prominent feature of Go is the dynamic and holistic thinking strategy in addition to the analytic thinking strategy.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Integrated Mathematics

Course Code: ~Mat140

Description: Integrated Mathematics develops the students' ability to solve real world problems. This

course features informal geometry, basic algebraic concepts, probability and statistics, measurement, and fractions. Students study mathematical terminology, concepts such as similarity and congruence, area, perimeter, and volume. Problems in statistics include applying the mean, median, mode, and range while utilizing graphs, tables, and charts to make predictions and inferences.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 8

Introduction to Algebra

Course Code: ~Mat145

Description: The concepts of ratio, proportion, and percent are covered in the Introduction to Algebra course. Word problems that help explain the use of proportions and percents are discussed. Integers are also introduced in this class as the students learn to add, subtract, multiply, and divide positive and negative numbers. The order of operations is an integral part of the course, as are understanding exponents and working with variables.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 8

Introduction to Algebra II

Course Code: ~Mat290

Description: This course is designed for students who have already taken Algebra I and Geometry and provides the opportunity to review the most important skills in these areas. Topics covered include: solving equations and inequalities, graphing linear equations, using algebraic reasoning to solve for various angle measures, parallel and perpendicular lines, triangles and polynomials. Once students have fully developed these skills, they will work on solving word problems related to these particular topics. Standardized test sample problems, such as those found on the ACT, will be utilized for this purpose.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 8

Introduction to Probability & Statistics

Course Code: ~Mat250

Description: This course covers topics in both descriptive and inferential statistics. Topics include permutations, combinations, axiomatic probability and statistical inference. The course consists of displaying, analyzing, and interpreting various graphs with given data. Students will calculate measures of central tendency with group frequency distributions and learn about outliers. Calculating measures of dispersion (range, quartiles, interquartile range, standard deviation, and variance) for both samples and population will be taught. Students will also learn how to utilize the TI-83 calculator to display and understand data.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11, 12 Credits: 3

Lies My Geometry Teacher Taught Me

Course Code: ~Mat310

Description: What would happen if lines don't extend forever? What if parallel lines actually can intersect? What if triangles don't actually add up to 180 degrees? What if everything you've ever been taught about geometry is wrong? Explore and investigate planar geometry concepts in a non-planar space. Learn about points, lines, triangles, circles, and other geometric concepts the way mathematicians do: by questioning assumptions, looking for patterns, and discovering new mathematical truths.

Prerequisites: Algebra I Permission Required: No

Grades: 8, 9, 10, 11, 12 Credits: 6

Mathematics: Test-Prep Strategies

Course Code: ~Mat175

Description: This course is designed to help individual students improve their mathematics skills and knowledge of test taking techniques for standardized achievement tests, especially college admission testing. Course material is developed and based on standard test examples.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11, 12 Credits: 1

Music and Math

Course Code: ~Mat160

Description: In the Music and Math course, students study the physics of the vibration of stretched strings in terms of frequencies and lengths of the strings. Using guitar strings, they discover the specific patterns among the lengths of the strings whose natural frequency difference produces semitones in musical scales. After studying the geometric sequence, they identify the common ratio of the sequence as the twelfth root of two, which is approximately equal to 1.059. Studying the patterns of major scales in any key signature, they learn the triad and the 7th chord and their progression in songs. This course is recommended for students who have an interest either in mathematics or music and are motivated to increase their mathematics knowledge.

Prerequisites: Permission Required: No

Personal Finance

Course Code: ~Mat220

Description: The Personal Finance course develops a student's ability to comprehend day-to-day finances in a technological society. Students are taught what types of banks and bank accounts are appropriate for their individual life styles. Specific units of study include checking accounts, the advantages and disadvantages of using credit cards, and paychecks, specifically targeting tax deductions, gross, and net pay.

Prerequisites: Permission Required: No

Grades: 11.12 Credits: 3

Pre-Calculus Course Code: ~Mat150

Description: The Pre-Calculus course includes the study of functions, circular functions, exponential and logarithmic functions, sequences, and series. The limit concept is introduced through infinite series.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 8

Statistics I

Course Code: ~Mat255

Description: The main objective of Statistics I is to provide students with skills to deal with acquisition, analysis and representation of data in useful formats. Topics include characteristics of data, statistical concepts, and statistical charts. Microsoft Excel is used extensively to process data and represent data graphically.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 8

Trigonometry Course Code: ~Mat155

Description: In Trigonometry, the topics covered include trigonometric functions, graphing trigonometric functions, right triangle trigonometry, the law of sines, the law of cosines, trigonometric identities, and inverse trigonometric functions. The students solve many intriguing word problems, with the use of a graphing calculator, from the construction of the pyramids of ancient Egypt to the building

of bridges and skyscrapers.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 8

Using the Graphing Calculator

Course Code: ~Mat165

Description: Students develop self-confidence while learning a variety of functions available on a graphing calculator. Experience shows that the level of skillful use of the graphing calculator is directly proportional to the accurate performance of most students completing high school mathematics assignments. The class also studies the historical development of the method for finding Pi, as students have fun and develop their enthusiasm for learning significant mathematics. This course is designed for students who have a sound understanding of algebraic concepts.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Physical Education

Advanced Outdoor Adventure

Course Code: ~Pe105

Description: The Advanced Outdoor Adventure class is an advanced physical education class. Participants are required to have already successfully taken Outdoor Adventure and have a background in group games and team-work skills. This class focuses on developing leadership skills through a higher level of training for the participants. Each student is required to go through the belay certification program and will be trained in safety techniques (bear claws and pulley repair) and basic wilderness first aid (will not be a certification program). Students are taught how to develop and facilitate team building and problem solving games, as well as leading high ropes activities. Because of the advanced nature of the class, students will be working on the high and low ropes courses in cooler weather, as long as it is safe to do so.

Prerequisites: Permission Required: No

Athletic Director Internship

Course Code: ~Pe155

Description: This internship course will is open to any junior or senior who is involved in the athletic program. Interning students assist the Athletic Director in the management of the athletic website, the scheduling of contests for athletic teams, the set up of athletic events, and perform other related office tasks and game preparation responsibilities. Students should have good communication skills, general computer knowledge and a willingness to work at events outside of the classroom. The Athletic Director will assist academic advisors in the process of selecting individuals for this class/internship. This four-credit internship class meets for three terms and requires an additional commitment of approximately two hours per week before and after school.

Prerequisites: Permission Required: No

Grades: 10, 11,12 Credits: 3

Exercise Physiology

Course Code: ~Pe190

Description: The objective of this cross-curricular course is to provide students with an anatomical outline of the human body as it relates to body movement conducted during physical activity such as exercise and sports. Students will participate in various sports, games, and exercise focused on different portions of musculature. This course consists of both classroom learning and physical exercise.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Golf Statistics

Course Code: ~Pe205

Description: The objective of this cross-curricular course is to provide students with real world application of mathematic principles. The primary way of learning those principles being the use of golf statistics. Real world data will be gathered while students use the golf simulator. This course consists of both classroom learning and physical exercise.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Introductory Nutrition and Fitness Course Code: ~Pe185

32

Description: The objective of this cross-curricular course is to educate students on the basic elements of good nutrition principles and eating habits while also promoting the benefits of physical activity through exercise to help individuals establish a healthy lifestyle. Over time students will work with the instructor on creating an appropriate workout regimen for their goals. This course consists of both classroom learning and physical exercise.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11, 12 Credits: 3

Outdoor Activities and Forestry

Course Code: ~Pe210

Description: What better way to learn about the science and practice of planting, managing, and caring for forests than by spending time in the outdoors and putting theory into practice? By hiking and biking to different forested areas on school property students will be able to put into practice concepts and methods involving forestry into practice. This class will consist of classroom learning as well as outdoor activities and exercise.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Outdoor Adventure

Course Code: ~Pe100

Description: The Outdoor Adventure course has two main thematic components. The physical component involves use of the ropes course, initiative activities, and noncompetitive group games. The emotional component builds self-esteem, self-confidence, and ego strength. The ropes course and the group games are designed to increase agility, flexibility, balance, general strength and coordination. In addition to individual benefits, the course is meant to develop mutual trust among class members. The level of involvement in activities, as well as participation on the ropes course is individualized so that each student may achieve his or her full potential.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Physical Education (1 term this year)

Course Code: ~Pe130

Description: The Physical Education curriculum is designed to improve the individual's spirit, body, and mind. Classes are structured so that each student's need to improve or to learn new skills for team and individual sports is best met. Strategies and rules are taught to increase the enjoyment of participating

in a physically active environment. A great deal of emphasis is placed on teamwork, sportsmanship, and fair game play--the elements necessary for a positive and rewarding athletic experience. Physical Education classes not only teach skills useful in a variety of sports, but also address the issues of time management, following directions, effort and motivation. Students participate in a variety of activities that are both competitive and noncompetitive. Fitness activities are also incorporated into the program. Group workouts as well as individual workouts are introduced and followed through during the term.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Physical Education (2 terms this year)

Course Code: ~Pe130

Description: The Physical Education curriculum is designed to improve the individual's spirit, body, and mind. Classes are structured so that each student's need to improve or to learn new skills for team and individual sports is best met. Strategies and rules are taught to increase the enjoyment of participating in a physically active environment. A great deal of emphasis is placed on teamwork, sportsmanship, and fair game play--the elements necessary for a positive and rewarding athletic experience. Physical Education classes not only teach skills useful in a variety of sports, but also address the issues of time management, following directions, effort and motivation. Students participate in a variety of activities that are both competitive and noncompetitive. Fitness activities are also incorporated into the program. Group workouts as well as individual workouts are introduced and followed through during the term.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Physical Education (3 terms this year)

Course Code: ~Pe130

Description: The Physical Education curriculum is designed to improve the individual's spirit, body, and mind. Classes are structured so that each student's need to improve or to learn new skills for team and individual sports is best met. Strategies and rules are taught to increase the enjoyment of participating in a physically active environment. A great deal of emphasis is placed on teamwork, sportsmanship, and fair game play--the elements necessary for a positive and rewarding athletic experience. Physical Education classes not only teach skills useful in a variety of sports, but also address the issues of time management, following directions, effort and motivation. Students participate in a variety of activities that are both competitive and noncompetitive. Fitness activities are also incorporated into the program. Group workouts as well as individual workouts are introduced and followed through during the term.

Prerequisites: Permission Required: No

Sports History

Course Code: ~Pe200

Description: The objective of this cross-curricular course is to provide students with an overview of individual sports and their origin while also looking at specific time periods and historic events during which those sports developed. Students will participate in various sports originating from different time periods. This course consists of both classroom learning and physical exercise.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Sports Photography Course Code: ~Pe215

Description: During this course, students will learn the functions and operation of a digital camera in order to take successful pictures of the human body in motion during physical activity. In addition, students will participate in exercise, games, and sports to provide models for picture taking. This course will include classroom learning and physical activity.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Sports Science

Course Code: ~Pe195

Description: The objective of this cross-curricular course is to demonstrate scientific principles though the use of games and sports. Classroom lecture and discussion will provide the student with the background information needed to show how these scientific principles apply to different sports and games. This course consists of both classroom learning and physical exercise.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Swimming

Course Code: ~Pe180

Description: Students in swimming class will utilize the pool in the RMB Center. They will be expected to swim a designated amount of laps, learn proper strokes in swimming, and participate in group water games. There will be time to use the diving board and other equipment to enhance swimming experience. Students are expected to swim on a daily basis.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Pragmatics

Abnormal Psychology Course Code: ~Pra175

Description: The Abnormal Psychology course reviews the etiology, diagnosis, prevention, and treatment of abnormal behavior, including the anxiety and psychosomatic disorders, depressive disorders, social and interpersonal disorders, substance abuse disorders, psychoses, and other abnormal personality patterns. Psychopharmacology, theories of counseling, and individual and group therapy are discussed. Students learn through lecture, activities, readings, discussions and documentaries.

Prerequisites: Psychology Permission Required: No

Grades: 11,12 Credits: 3

Child Development Course Code: ~Pra155

Description: The Child Development course supplies those students interested in pursuing psychology in college an opportunity to work with a college text. Students cover various topics such as the three developmental processes, history of child development, different theories of development, and the periods of development. The material is presented lecture style and projects are used to help the students develop their own understanding of how a child develops. Students are presented with a syllabus and are expected to manage their own deadlines, as well as summaries of the text readings.

Prerequisites: Biology Permission Required: No

Grades: 11.12 Credits: 3

Coping with Stress Course Code: ~Pra225

Description: Coping With Stress was designed to assist students in understanding stress and the effects it has on their lives. Students identify stressors in their lives and are taught strategies to manage their stress more effectively. Topics include listening and expression skills, identification of one's emotions, problem-solving, assertiveness, and a variety of relaxation and stress-reducing techniques. Skills are practiced in class and through structured homework assignments, which result in generalization.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Gender Studies

Course Code: ~Pra130

Description: The Gender Studies class addresses relevant issues pertinent to adolescents. The class addresses social and personal issues within a gender-specific context. The primary focus of the class is to instruct students on various social issues while also creating an environment in which students can feel comfortable to discuss and question various gender specific concerns. The development of each student's own values is an important part of the class, as well as expressing those values clearly and assertively. This is accomplished through class discussions, small group activities, critical thinking exercises, role-playing, and analysis of each student's values and beliefs. Some of the topics discussed are healthy relationships and the portrayal of genders in the media, including body image and personal rights and responsibilities.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Intrapersonal Pragmatics

Course Code: ~Pra120

Description: The Intrapersonal Pragmatics course assists students as they become more responsible for their thoughts, emotions and behavior. As in all pragmatics courses, the course strategy is to instruct students about the various topics targeted in the classroom through roleplays and discussion, and to encourage the generalization of said skills outside of the classroom. Some course topics include harassment and teasing, the effects of self-talk, and three styles of behavior: passive, aggressive and assertive.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Mindfulness in Everyday Life

Course Code: ~Pra195

Description: Mindfulness can transform how you are in your body—in your mind—with your friends at your work—in the world. Learn how to breathe, how to walk, how to sit, how to eat a potato chip, how to listen to a bell, how to turn a door-handle, how to talk, and how to listen, in an entirely new way. Learn how to be fully in the present moment—the only moment we ever have. The course will include exercises both inside and outside the classroom, readings, and discussion, films on meditation, and if time permits, a tour of the Insight Meditation Society in Barre, Massachusetts.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Movements: Basic Self Defense

Course Code: ~Pra230

Description: This class involves a combination of basic self-defense and the study of women's issues. Participants will spend three days a week learning and practicing the basic techniques of self-defense and the importance of self-awareness. Through safety discussions, students will discuss topics such as, how to use your voice, and the power of body language: verbal and nonverbal cues. Two days of the week will be dedicated to women's studies wherein students will explore how women's roles in U.S. history have changed and expanded. Students will focus on political, social, economic, educational, and gender issues. Through media and technology, writing, presentations, and discussions, students will broaden their knowledge and critical thinking skills while respectfully considering other perspectives. The class is open to female juniors and seniors.

Prerequisites: female students Permission Required: No

Grades: 11,12 Credits: 1

Positive Psychology

Course Code: ~Pra140

Description: Positive Psychology assists students in understanding stress and the effects it has on their lives and interpersonal relationships. Students identify stressors in their lives and learn skills to assist them in managing their stress more effectively. Topics are presented through lecture and discussion with a goal of student self-exploration. Appropriate use of the skills is demonstrated and followed by student rehearsal in class activities. The goal of the practice sessions is to establish the skills while also offering the opportunity to examine alternative methods of handling situations. Additional practice occurs in structured homework assignments with feedback given the following class period. Generalization is encouraged through practice of skills during daily concerns volunteered by students accompanied by their understanding of alternative strategies. Topics include identifying positive and negative stressors, coping techniques, and effects on overall health.

Prerequisites: Permission Required: No

Psychology

Course Code: ~Pra200

Description: The Psychology course is designed to provide students with an understanding of the basic concepts and techniques of psychology as a behavioral science. Topics include a basic understanding of the scientific method, familiarity with writing techniques used in psychology, terminology and theories, and an overview of research methods. Through the study of human behavior and personality development along with activities and critical thinking skills, students gain an increased knowledge and understanding of themselves and others. The course uses small group activities, lectures, discussions, films and other media.

Prerequisites: Biology Permission Required: No

Grades: 11,12 Credits: 3

Seminar on Learning

Course Code: ~Pra100

Description: The Seminar on Learning course provides students with a general overview of the history and development of the field of special education (social and cultural factors are addressed). More importantly, students develop a self-awareness pertaining to their own individual learning approaches, identify areas of academic strengths, and help those in need of further development. Learning strategies are introduced and explained, providing students with the opportunity to utilize these strategies in their current coursework in other subject areas. Students are exposed to a series of multi-modal instructional tools that introduce and explain the importance of self-advocacy and teach them to understand the process of appropriately addressing one's own academic needs.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Social Emotional Communication

Course Code: ~Pra240

Description: Social Emotional Communication supports students to develop foundational skills that are important in maintaining healthy relationships and interpersonal communication. Skills are presented in an organic, conversation style with each individual student in mind. Skills are demonstrated, modeled, and followed by student rehearsal in class activities. The goal of the practice sessions is to establish the skills while also developing the students' level of self-esteem, confidence, and social emotional learning. Generalization is encouraged through increased confidence stemming from positive reinforcement of the successful demonstration of skills. Topics include building and maintaining healthy relationships, respectful etiquette within relationships, and mindfully managing peer pressure.

Prerequisites: Permission Required: No

Verbal Communication

Course Code: ~Pra125

Description: The Verbal Communication course develops enhanced verbal skills and strategies for students that have basic pragmatic skills and the ability to understand the fundamentals of conversation. The goal of the course is to develop the students' ability to understand the messages that they give and receive, as well as to consider the perspective of their audience. Topics include interview skills, basic conversation skills, and public speaking.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12

Credits: 3

Reading

Close Reading Strategies for Fiction

Course Code: ~Rea280

Description: The Close Reading Strategies for Fiction course covers the multi-sensory, explicit, sequential learning of the art of understanding various fiction genres - how to analyze, synthesize and use critical thinking skills to understand fictional text. Students learn the structure of narrative writing with the assistance of graphic organizers, vocabulary development exercises, and class discussions. This course is a great starting place for those with developing reading comprehension skills. The course may be combined with Expository Reading Comprehension or taken singly.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 6

Comprehension Imagery

Course Code: ~Rea125

Description: The Comprehension Imagery course covers the multi-sensory, explicit, sequential learning of the art of concept imaging in order to increase the ability to form pictures or "movies" in one's mind while reading. This skill expands language and reading comprehension, reasoning, critical thinking and expressive language skills. This course is for students who have an underdeveloped ability to picture and remember scenes while they read, dramatically affecting comprehension, memory and critical thinking.

Prerequisites: Permission Required: No

Reading Between the Lines

Course Code: ~Rea300

Description: Reading Between the Lines allows students to hone their skills at making inferences. In order to infer meaning from text, readers must combine information from the text with their own background knowledge to make a theory about what is possibly true. Students will practice the skill using a variety of media such as short film clips, photos, cartoons, song lyrics, and short passages. When they have gained proficiency, they will apply the skill to short stories.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Reading Development

Course Code: ~Rea275

Description: The Reading Development course teaches the multi-sensory development of advanced decoding skills through understanding of linguistic structures (phonetic and meaning-based patterns in words of Anglo-Saxon, Latin, Greek, and French origins), grammar, multi-syllabic word attack, vocabulary development, and specific comprehension and encoding (spelling) approaches. Reading Development is for students who need further explicit instruction to improve decoding and related reading skills after Word Attack Skills or Reading Tutorial.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 6

Reading Fluency

Course Code: ~Rea120

Description: The Reading Fluency course covers the development of reading fluency through intensive oral and silent reading practice linked with comprehension, multi-syllabic word recognition mastery, and vocabulary development. This course is for students whose reading speed/accuracy is below expectations and impairs memory and comprehension of what is read. This course may be taken more than once.

Prerequisites: Permission Required: No

Reading for Academic Purposes

Course Code: ~Rea135

Description: Reading for Academic Purposes covers the multi-sensory, explicit, sequential learning of the art of understanding nonfiction text through focusing on collecting, organizing, and synthesizing information in that text. Graphic organizers, teacher modeling, class discussion, notetaking and summarizing are presented, with a particular emphasis on identifying main ideas and supporting details. This course is for students who have developing comprehension skills with academic text. This course may be combined with the Reading Comprehension for Fiction course or taken singly

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 6

Reading Tutorial

Course Code: ~Rea100

Description: The Reading Tutorial course provides a multi-sensory, alphabetic-phonetic and sequential approach to basic word attack, reading, spelling, and writing skills, explicitly teaching the association between written symbols and their spoken sounds and the correspondence between the sequences of sounds and the sequences of letters. Students read words in isolation, participate in sound dictations, spell targeted words and sentences, read orally from appropriate skill level trade books, and write short pieces. This course is designed for students with significant weakness in basic decoding skills, who may also have coexisting challenges that would cause difficulty making effective progress in a group of more than three students. Students appropriate for Reading Tutorial are in need of individualized, explicit, intense instruction in order to make effective progress. This course may be taken with the permission of the reading department and may be taken more than once.

Prerequisites: Permission Required: Yes

Grades: 8, 9, 10, 11,12 Credits: 8

Selected Short Stories

Course Code: ~Rea285

Description: The Selected Short Stories course provides an opportunity for students served by the reading department to continue sharpening their vocabulary, fluency, and comprehension skills. Through reading carefully selected literature, students will continue to foster a love of reading while exploring short stories. This course can be used as a precursor for literature courses in the English department.

Prerequisites: Permission Required: No

The Novella

Course Code: ~Rea260

Description: The Novella course provides an opportunity for students served by the Reading Department to enjoy the classics while sharpening their vocabulary, fluency, and comprehension skills. By working with a carefully selected literature, students will continue to foster a love of reading while exploring classic novellas. This course can be used as a precursor for literature courses in the English department.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Word Attack Skills

Course Code: ~Rea270

Description: The Word Attack Skills course teaches the multi-sensory development of decoding skills through recognition and understanding of linguistic structures (phonetic and meaning based patterns in words of Anglo-Saxon and Latin origins), multisyllabic word attack, and vocabulary development, and specific comprehension and encoding skills. This course is for students with emerging multisyllable decoding and spelling abilities, perhaps causing dysfluent reading and poor comprehension.

Prerequisites: Permission Required: No

Science

All About Birds!

Course Code: ~Sci440

Description: This course introduces several unique aspects of bird physiology and behavior within the animal kingdom. It also explores the life history, speciation, and migration patterns of birds. This course will also discuss factors of avian life history that have been influenced by humans as well as the environmental significance of our interest in bird life and behavior.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Anatomy and Physiology Course Code: ~Sci100

Description: This full year course will introduce students to the structure and function of the human body. Topics will include anatomical terminology, detailed exploration of all major body systems, and common diseases affecting humans. Students will learn how the systems of the body work together by completing a series of laboratory exercises and through class demonstrations.

Prerequisites: Biology Permission Required: No

Grades: 11.12 Credits: 8

Beekeeping (fall AND spring)

Course Code: ~Sci450

Description: This course on beekeeping takes a beginner beekeeper, with no experience, and teaches them the history, the uses, and the "how-to" of being a beekeeper. Students will learn about popular hive designs, construct their own beehives and frames, install live honey bee colonies, split hives, and learn to care for hives during the warmer months. Students will learn how to spot hive diseases, how to medically treat hives, as well as how to collect and extract honey and wax from hives. Students will learn how to prepare hives for winter months, as well as bottle and sell honey to the local community.

Prerequisites: Permission Required: No

Beekeeping (fall OR spring)

Course Code: ~Sci450

Description: This course on beekeeping takes a beginner beekeeper, with no experience, and teaches them the history, the uses, and the "how-to" of being a beekeeper. Students will learn about popular hive designs, construct their own beehives and frames, install live honey bee colonies, split hives, and learn to care for hives during the warmer months. Students will learn how to spot hive diseases, how to medically treat hives, as well as how to collect and extract honey and wax from hives. Students will learn how to prepare hives for winter months, as well as bottle and sell honey to the local community.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Biological Illustration

Course Code: ~Sci105

Description: This course introduces students to the major systems and functions of the human body with a multidisciplinary approach. The class integrates the study of systems through lab approaches, including dissection, and various artistic approaches, including illustrative techniques.

Prerequisites: Permission Required: No

Grades: 9, 10, 11,12 Credits: 3

Biology

Course Code: ~Sci110

Description: Unit one emphasizes the principles, concepts, terminology, and techniques involving the study of living organisms at the cellular level. The course investigates how metabolic processes work within cells and how those processes contribute to cycles in various levels of organization in the natural world.Unit two emphasizes the principles, concepts, terminology, and theories involving the study of evolution and the history of life on Earth. The topics of changing populations will provide a foundation for the study of ecosystems.Unit three emphasizes the principles, concepts, terminology, and techniques involving the study of how living things transfer heredity. The basic processes of modern biotechnology specific to genetics are introduced and practiced in this course.Unit four emphasizes the principles, concepts, terminology, and techniques involving the study of living organisms, their processes, development, and relationships. Each kingdom of living organism from bacteria to humans is covered in detail.

Prerequisites: Permission Required: No

Chemistry

Course Code: ~Sci120

Description: Unit one explores the structure of the atom and the resulting properties. It also includes common themes and phenomena that recur in chemistry. This course segment also specifically addresses and practices various information acquisition modes to assist the learning process. Unit two explores the types of chemical bonding, properties of the resulting compounds and the naming system for inorganic chemicals. This course segment also provides practice in information acquisition through notes, diagrams, and table-graphic organizers. Unit three explores the quantitative aspects of chemical reactions. This course segment also focuses on mathematical strategies applied to problems of chemistry. Unit four explores the nature of solutions, and acids, bases, and salts and other specific topics as time allows.

Prerequisites: Physical Science, Algebra 1 Permission Required: No

Grades: 10, 11,12 Credits: 8

Conceptual Physics Course Code: ~Sci125

Description: This course emphasizes the concepts needed to understand the relationships of matter and energy that create physical phenomena and applications to technology.

Prerequisites: Permission Required: No

Grades: 9, 10, 11,12 Credits: 8

Environmental Science

Course Code: ~Sci175

Description: The Environmental Science course emphasizes the terminology, theories, and cycles evident in various environments, as well as the relationships among ecosystems. The students will focus on the changes brought about by human involvement and current topics such as pollution, the greenhouse effect, pest control, and biodiversity.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11, 12 Credits: 3

General Science

Course Code: ~Sci185

Description: This course explores the fundamentals of physical interactions, Earth sciences, material sciences and life sciences.

Prerequisites: Permission Required: No

Grades: 8 Credits: 8

Health

Course Code: ~Sci385

Description: This three-term course emphasizes the long and short term health effects of alcohol, illicit drugs, and tobacco; the long term effects of physical fitness; and a study of nutrition. Additionally the students are introduced to the human reproductive system and the processes of conception, pregnancy, and birth. The importance of healthy sexual practices is addressed in a comprehensive manner, encompassing both the use of various methods of contraception and the benefits of abstinence. Sexually transmitted infections (STIs) are also addressed in this course. Methods of dissemination include class discussion, lecture, documentaries, and projects to assist the students in understanding and investigating the relationships among physical health, mental health, and peer pressure, as well as navigating social relationships. This course also develops skills and poses challenges for college preparation through varied information acquisition, presentation of knowledge, and discussion of intrapersonal experiences.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Health: CPR & First Aid Certification

Course Code: ~Sci390

Description: The CPR/First Aid Certification course combines lectures, demonstrations, and video with hands-on training and practice. Participants in this course learn to recognize and respond to emergencies including shock, cardiac and breathing emergencies for adults, children and infants, heat and cold emergencies, sudden illnesses, and poisonings. Additionally, participants learn first aid for everything from cuts and scrapes to muscle, bone and joint injuries.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Health: Drug Treatment and Policy

Course Code: ~Sci400

Description: What is different about the brain of a drug addict? Do some treatments work better than others? As a society, how should we deal with drug use? In this course, students will explore the science behind drug addiction and treatment and debate the reaction society at large should have towards drugs and drug use. Various approaches to drug use, including harm reduction, will be discussed.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11, 12 Credits: 1

Introduction to Marine Biology

Course Code: ~Sci210

Description: The Introduction to Marine Biology course emphasizes the principles, concepts, and terminology involving the study of marine organisms found in shallow water tropical ocean environments. The anatomy and relationships of organisms from algae to fish are examined in detail. The course also examines the human impact on this part of the ocean. The content of the course provides the students with the information and skills needed for a foundation in marine biology, and for further study in the life sciences. This course includes laboratory exercises and demonstrations to assist the students in understanding and investigating the processes of specific marine environments and provides practical manipulative and problem solving experiences.

Prerequisites: Zoology, Invertebrate; Zoology, Vertebrate Permission Required: No

Grades: 10, 11, 12 Credits: 3

Introduction to Robotics

Course Code: ~Sci335

Description: This course introduces each element of robotics including structure, motion, sensors, and programming controls necessary for this technology. This course uses the VEX Robotics platform and Easy C for Robots for programming.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Invertebrate Zoology

Course Code: ~Sci240

Description: Invertebrate Zoology offers an introduction to the kingdom "Animalia" and presents characteristics that are shared by all animals, as well as characteristics that make animals unique among all other living things. Evolutionary trends among organisms within the animal kingdom from the simplest forms of sponge to the most complex arthropods are introduced. The taxonomic categories of the animal kingdom are explained and used to compare traits of invertebrates from several major phyla. The developmental processes of animals from zygote to adult form are discussed in detail along with concepts relating to alternating forms of metamorphosis in various invertebrate species.

Prerequisites: Biology Permission Required: No

Grades: 10, 11, 12 Credits: 3

Maker Science

Course Code: ~Sci445

Description: How materials respond to manufacturing processes is the common theme explored through any number of projects of a student's choice. Materials vary from non-ferrous metals (jewelry metals), glass, wood or stone and a large variety of processes can be applied to projects making jewelry or other small decorative items. Journaling and research are used to enrich the experience.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Molecular Biology Course Code: ~Sci435

Description: Molecular biology is an intersection of both Biology and Chemistry and encompasses many of the technical and experimental fundamentals present in modern biomedical research, both academic and pharmaceutical. Students will get hands-on experience isolating DNA from microorganisms, modifying DNA sequences, transforming "engineered" DNA into living organisms and assaying the effects of the newly introduced DNA at the genetic and protein level. Students will also get hands-on experience with many of the technological tools needed to perform this work, from gel electrophoresis and polymerase chain reaction (PCR) to DNA sequencing. A lot of attention will be paid to designing proper biochemical assays and interpreting experimental results.

Prerequisites: Biology Permission Required: No

Grades: 10, 11,12 Credits: 3

Physical Science

Course Code: ~Sci255

Description: This course is an introduction to the principles and concepts of physics involving motion, energy, waves and electromagnetism, and the principles and concepts of chemistry.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 8

Physics

Course Code: ~Sci230

Description: This course emphasizes the mathematical techniques and concepts needed to solve problems involving physical phenomena of mechanics, forces, waves, sound, light, and electromagnetism.

Prerequisites: Algebra 2, Geometry, Physical Science Permission Required: No

Grades: 10, 11,12 Credits: 8

Product Design and Development

Course Code: ~Sci430

Description: This course explores the path from idea to final product through product design, marketing strategies, production design, material science, and manufacturing processes. Throughout the course, concepts presented are applied to the creation and development of a student's original design, marketing plan, production plan, and manufactured prototype of his or her product.

Prerequisites: Permission Required: No

Grades: 9, 10, 11,12 Credits: 6

Technology Design Challenge

Course Code: ~Sci235

Description: This course involves the incorporation of science in technology through the design and building of one or more projects. Project themes are rotated.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Vertebrate Zoology

Course Code: ~Sci245

Description: Vertebrate Zoology investigates the animal phylum, Chordata. Specifically the five major groups of vertebrates are covered in detail. This course involves direct interaction with the individual species being studied. Students will partake in experimentation and data collection on animal growth and behavior. These groups of animals include fish, amphibians, reptiles, birds, and mammals. This course includes laboratory exercises and demonstrations to assist the student in understanding and investigating the processes of living animals and provide practical manipulative and problem solving experiences.

Prerequisites: Biology Permission Required: No

Grades: 10, 11,12 Credits: 3

Visual & Performing Arts

CNC Woodworking Course Code: ~Vis475

Description: The CNC Woodworking class takes the student through the process of planning, designing, programming and running projects on a Shopbot CNC machine. The students will learn the process and create original pieces. They will have the opportunity to choose and design their own projects and see them through to a final product. Students are limited only by their imaginations in this class. As they master the Vcarve software, they will see their ideas come to fruition. Time will be divided between the desktop publishing computer room and the woodshop. While in the computer room, students will learn the software and design their projects. The second portion of the class will take place in the woodshop where their projects will be created using the CNC Shopbot machine.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

EHS Chorale

Course Code: ~Vis220

Description: The Eagle Hill Chorale class serves to increase the musicianship of individual students while building a musical ensemble. Musicianship is measured by students' understanding of 1) musical terminology and its applications, 2) what constitutes effective and healthy vocal technique, 3) how to achieve appropriate expression in singing and in choral performance, and 4) what is necessary from the individual at any one moment in a performance to improve the sound of the whole ensemble. Building any musical ensemble requires that its members, including the director, treat each other with respect and good humor; that they be mutually supportive, working for the good of the whole rather than of any one individual; and that they be willing to make substantive contributions towards publicizing and presenting the ensemble's concerts. Chorale students need to be able to sing in tune and to hold their part in a fourvoice choral arrangement.

Prerequisites: Permission Required: No Grades: 8, 9, 10, 11,12 Credits: 6

Making with Lasers

Course Code: ~Vis610

Description: Students in this course will become familiar with laser cutters and their different applications. The course begins with work in Corel Draw to create designs, models and prototypes. Students will then learn how to operate the makerspace laser. Challenge projects in design, cutting and assembly will be assigned. A final project will be determined and completed.

Prerequisites:

Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Making with Metal

Course Code: ~Vis605

Description: In this course students will be introduced into different areas of working with metal. Whether it is to solve a problem or to create a piece of art, metal can be used in many different ways. We will explore melting steel and casting it into new parts, welding and the different types and applications, sheet metal and assorted types of steel stock. Students will start with instruction, be assigned a number of challenges, then decide on a final project.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Orchestral Ensemble & Pit Band

Course Code: ~Vis520

Description: This course is a mixed-level instrumental ensemble in which students continue to improve their musicianship skills. Students must know how to play and own their instruments. By playing classical, jazz, and popular music, students will learn the skills necessary for collaborating as members of an ensemble. The greatest benefit of the course is the opportunity to be involved with the annual musical production in the pit band/orchestra.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 9

Acting Shakespeare

Course Code: ~Vis110

Description: Students will learn techniques for understanding and acting Shakespeare's works. Most important is that students find acting Shakespeare fun and enlightening. Emphasis will be put on learning to turn Shakespearian acting into a physical experience including stage combat, appropriate expressiveness, and clowning. The student will come away form the class wanting more Shakespeare in his/her life.

Prerequisites: Permission Required: No

Advanced Music Theory

Course Code: ~Vis530

Description: Advanced Music Theory takes up where Music Theory leaves off. The emphasis remains on becoming fluent in musical elements; a more complex study of musical elements including form, notation, and harmony. Students will work together and individually to develop their own ideas into notated original musical compositions, using the necessary musical elements required. Individual piano practice is a component of the course giving students the opportunity to practically apply their advanced musical knowledge to an instrument. In addition, students will advance their aural skills through the practice of dictation and sight reading. The course will use different types of music to analyze pieces' harmony and structure, and discuss the components of musical style. Recommended for students interested in IB Music.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Advanced Stage Combat

Course Code: ~Vis525

Description: In Advanced Stage Combat, students will review hand-to-hand and single-sword fighting techniques. Students will also expand their move set list with new and more advanced techniques. Students will learn and present a fight each week.

Prerequisites: Permission Required: No

Grades: 9, 10, 11,12 Credits: 3

Arts Management Internship

Course Code: ~Vis200

Description: Supporting the brilliant performances at the Cultural Center is the business of Arts Management. The performing arts can not happen without the important background work of budgeting, scheduling, coordinating, marketing, and publicizing. Arts Management student interns help to make the Cultural Center and its programs a success by playing a vital role in the Center's operation

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 9

Basic Acting Techniques

Course Code: ~Vis115

Description: Basic Acting Techniques is a course for beginners or a refresher class for seasoned actors.

This course covers acting techniques.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Basic Black and White Photography

Course Code: ~Vis280

Description: This course is designed to introduce the basic concepts and skills of black and white photography. This class will focus on proper use of the camera, darkroom techniques and creative photography. Students learn about the history of photography through discussion of the work of 19th and early 20th century photographers, contemporary photographic artists, and through demonstration of lens less photography.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11, 12 Credits: 3

Book Arts

Course Code: ~Vis415

Description: Book Arts refers to all types of handcrafted books. This course will introduce students to the concept of the book as an art form. It will increase awareness and appreciation of the beauty and variations in artists' books and develop students' skills in the handling of the materials and tools necessary in creating a book. A special focus of Book Arts will be one-of-akind artists books: a vibrant medium where creativity can be expressed through the considerations of typography, illustration, page design, text, binding structures, and presentation. Creating an artist's book is a process of continued growth and creativity.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Dance Concepts Course Code: ~Vis595

Description: Dance Concepts is a studio course that explores the dance activities of improvisation, technique, choreography/composition, and performance. Students will create and perform short and informal dance studies in a variety of styles and will use movement analysis, choreographic concepts, and personal reactions to write about and critique dance performances, both informal and professional. Students will engage in creative/critical conversations that challenge their awareness of arts making, individual creative voice, and the overall process of discovery. Close attention will be paid to an ethical creation of work and the authentic use of voice.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Desktop Publishing & Yearbook

Course Code: ~Vis190

Description: This course utilizes the computer software Adobe Creative Suite to produce the school's yearbook. Targeted skills include using digital cameras, scanners, preparing photographs for publication, page layout and design, and meeting publisher's deadlines.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Film as Art

Course Code: ~Vis135

Description: Film as Art explores American and foreign films as an art form. The objective is to develop a keen, critical appreciation of films, from all over the world, as art. The method is to work with established criteria for judging and appreciating the film medium. Students view films and read the reviews of each film. Then each student writes his or her own review based on the established criteria.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Hand Built Pottery

Course Code: ~Vis255

Description: This course emphasizes the expressive potential of pinch, coil, and slab construction pottery. Students are assigned weekly projects based on the instructor's demonstrations. Projects range from creating functional to sculptural forms, introducing students to methods of pottery making, decorating, and techniques and tools for developing the aesthetics of form and function in pottery making.

Prerequisites: Permission Required: No

Introduction to Technical Theater

Course Code: ~Vis570

Description: The Introduction to Technical Theater class will work with students who have an interest in exploring the world of backstage work. They must demonstrate attention to detail, teamwork, organizational skills, responsibility, initiative, and a can-do attitude. They will work with faculty members designing and implementing lighting, sound, rigging, and set construction, and running the technical functions for each concert and production—in addition to less glamorous but equally important labor such as setting up risers and other furniture, and helping to keep equipment organized and wellmaintained. This introductory class will be an opportunity to see if the Technical Theater Intern program is a good fit for the student.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Jam Band

Course Code: ~Vis240

Description: The Jam Band course provides students with an understanding and appreciation of collective creative expression in music through playing and singing, both in class and in live performances. Students develop creative skills, performance techniques, and social skills through working with their instruments, different musical forms, specific songs, and the benefits and challenges of musical group dynamics. The culmination of the course is an all-day recording session at a professional studio, where the class essentially creates its own CD.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 6

Mixed Art Media

Course Code: ~Vis260

Description: The Mixed Media course encourages creative expression that incorporates multiple materials within two-dimensional artwork. Openness to experimentation is essential. Through freely manipulating traditional materials such as pencil, ink, paint, chalk, and crayons with nontraditional materials such as adhesives, foils, and transfers, students develop a flexible approach to the problem of visually expressing and presenting their creative thoughts.

Prerequisites: Permission Required: No

Music Appreciation

Course Code: ~Vis460

Description: Music Appreciation is open to all levels of students who enjoy listening to and discussing music. Students will bring their own musical interests to class discussions through presentations on songs and artists while learning about the diverse musical interests of their peers. Through readings and class discussion students will be introduced to a variety of musical styles and cultures. Tailored to the individual group, possible topics explored in Music

Appreciation include song writing, drums of the world, and Western music history and important composers.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11, 12 Credits: 3

Music Theory

Course Code: ~Vis215

Description: Music Theory is open to any student who is interested in music to develop a basic understanding and knowledge of the theory behind why music works, while gaining basic keyboard and sight-reading skills. This course helps students build a foundation in basic musical elements as they discover how pitch, rhythm, harmony, and structure work together to create original music. Students will study existing music to understand compositional rules and techniques, while using their knowledge to analyze the form, key, and rhythmic features as well. This course provides essential groundwork for students interested in music performance and composition, as well as a good introduction to those new to music study. Possible topics include learning the Circle of Fifths, finding the right chords for a melody, figuring out rhythmic patterns, and sight-reading at the keyboard. A Prerequisite for Advanced Music Theory and recommended for those interested in IB Music.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

One Act Competition Course Code: ~Vis125

Description: An advanced acting course for students who want to be involved in dramatic competitions with other schools. Students would have to audition or be screened by me to take part in the class. The commitment would mean that students would agree to allthat is required by the Massachusetts High School Drama Guild including attending technical rehearsals and Performances as scheduled by the Guild. In addition, they would make a commitment to attend all rehearsals called by the director. Students would receive state recognition for their efforts as well as having the experience of performing in a competitive venue.

Prerequisites: Permission Required: Yes Grades: 8, 9, 10, 11,12 Credits: 3

Photoshop

Course Code: ~Vis185

Description: This course utilizes the computer graphics program, Adobe Photoshop CS3. Targeted skills include scanning, digital photography, manipulation of photographs, collages and the basics of digital darkroom techniques.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Pin Hole Photography

Course Code: ~Vis270

Description: Pinhole cameras belong to a magical world of slowness, simplicity and surprise, where creativity, imagination and the unexpected replace fast-paced, expensive, complex technologies. Pinhole cameras have no lenses, shutters or viewfinders. Using paint-can cameras, students work in a variety of settings indoors and outside.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Print Making

Course Code: ~Vis180

Description: This course utilizes the graphics processes of dry-point etching and block printing to create art prints. Dry point etching involves making deep scratches into a plastic plate, which are then filled with ink. The print is created by placing the inked plate between a press and wet paper and applying substantial pressure. Block printing involves carving away part of a wood or rubber block and printing the remaining raised portion. The history of both of these printing processes and studies of relevant artists such as Rembrandt and M. C. Escher are on-going themes throughout the course.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Public Speaking Course Code: ~Vis365

Description: A fun, practical course to improve your ability to communicate with others and become an effective student and leader.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Puzzle-ology Studio

Course Code: ~Vis585

Description: Students will try out a wide range of puzzles and games (Crossword, Sudoku, etc.) that exercise diverse human abilities (verbal reasoning, spatial reasoning, pattern recognition, planning, etc.). They will learn to write reviews of puzzles. They will design at least one new puzzle of a type of their choosing, create a quick prototype of it, and playtest it with focus groups. After passing the playtest process, they will then construct a polished version of the puzzle. During the prototyping and polished version stages, students may use design software and making tools of the maker space to print out parts for their game/puzzle.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Screen Printing for Commercial Graphics

Course Code: ~Vis165

Description: This course utilizes the graphics process of screen printing, focusing on projects such as t-shirts, stickers and posters found in the commercial graphics field. In screen-printing, the principle involved is forcing ink through a stenciled screen. Procedures for making screens will include both hand-cut and photographic methods.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Screen Printing: Warhols Course Code: ~Vis160

Description: This course utilizes the graphics process of screen printing. In screen-printing, the principle involved is forcing ink through a stenciled screen which has been created utilizing a photographic process. Basic art skills such as drawing, painting and color theory are targeted. Students create a 'selfportrait' in the style and manner of 60's pop artist, Andy Warhol who is considered to be the first artist to combine the areas of fine-arts and graphics.

Prerequisites:

Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

Set Building and Design

Course Code: ~Vis140

Description: This course exposes students to the technical and creative aspects of set designing and building. Students design and build sets to be used in productions at Eagle Hill School. Using hand drawings and theater software, students create interactive 3-D computer models of theater or performance spaces where the systems usually associated with performance (lights, sound, fly bars, revolves, and trucks) are used. Basic carpentry and electrical skills are learned while building sets, as well as painting and color coordination for dramatic effect. In addition, students learn about 'dressing the set' for performances.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Stage Combat

Course Code: ~Vis385

Description: In Stage Combat, students learn about stage combat and how to fight safely on stage. The two areas they will be working on are hand-to-hand combat and single-sword combat. Hand-to-hand combat entails falling, slaps, grabs, chokes, pushes, tackles, punches, and kicks. Single-sword combat is sword fighting with one sword. Students will learn the parts of a sword and terms of the trade. The class will train in the fighting techniques and will perform in front of an audience.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Studio Art & Portfolio Preparation

Course Code: ~Vis285

Description: This class is designed for students who want to continue their artistic efforts at a more advanced level and/or intend to participate in post-high school graduation education at an art school, college, or university. Students work in all areas of art with particular emphasis on drawing, painting, and two-dimensional design. Through a variety of projects students are encouraged to look at and respond to themselves in terms of the aesthetic world around them. Students experience many opportunities to explore varied media, art styles, and subjects. To be successful in this class, students are required to complete homework on a weekly basis and keep a thorough personal sketchbook of observation sketches.

Prerequisites: Permission Required: Yes

Grades: 11,12 Credits: 9

Technical Theater Internship

Course Code: ~Vis205

Description: Students manage and run the state-of-the-art theatrical lighting, sound, and rigging systems at the Cultural Center for our own plays, concerts and other functions and for visiting productions. Interns must be interested in technical theater and ready to be a responsible, reliable, devoted member of a team. Student interns participate in intensive training. Then, they take on responsibilities such as consulting with performing artists about their technical needs, designing and implementing lighting, sound, rigging, and set, and running the technical functions for each concert and production. Ongoing professional development helps interns hone their practice of technical arts. Interns work at scheduled times but must also be available as-needed. They earn academic credit, but more importantly, they benefit from the exciting experience, becoming expert in theatrical systems, collaborating with performing artists, and building unusually substantive resumes.

Prerequisites: Permission Required: No

Grades: 9, 10, 11,12 Credits: 9

Woodworking

Course Code: ~Vis155

Description: This course acquaints the students with the essential principles of woodworking. Topics include wood characteristics, use of hand tools, portable power tools, and basic machinery. Emphasis is placed on proper technique, safety, and policies for the woodshop. Students complete a project designed to develop primary woodworking skills.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 3

Woodworking: Box Making

Course Code: ~Vis555

Description: In this course students learn basic woodworking techniques, power/hand tool use and safety while making a small box project. The project will start with a student generated design idea, developed cooperatively with the teacher. As the design evolves, the student will learn about design aspects as well as how various woodworking techniques play an important role in the project's development. Each student will complete a small box of their own design before the term's completion.

Prerequisites:

Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 1

World Languages

Latin I

Course Code: ~Wor110

Description: Latin I provides a general introduction to the nature of language study for students across the spectrum of backgrounds and abilities. Goals for the series of Latin courses include students: reading the Latin of classical authors with confidence; developing an awareness of the culture of the Romans, including its historic significance and contemporary relevance; enhancing their general language learning techniques and aptitudes, including facility with English; and developing their thinking skills by strengthening the skills used for deductive and analogous reasoning, interactive learning, comparative analysis, and critical assessment.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 8

Latin II

Course Code: ~Wor115

Description: Latin II provides continued instruction in the language. Goals for the series of Latin courses include: reading the Latin of classical authors with confidence; developing an awareness of the culture of the Romans, including its historic significance and contemporary relevance; enhancing students' general language learning techniques and aptitudes, including facility with English; and developing thinking skills by strengthening deductive and analogous reasoning, interactive learning, comparative analysis, and critical assessment.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 8

Spanish I Course Code: ~Wor140

Description: Spanish I introduces students to Spanish culture and language. Students read, write, listen and speak about cultural topics such as home and family, community, health, environment, education,

food, clothing, and leisure activities. Students learn to express information about themselves and to compare and contrast their cultural backgrounds with those of Spanishspeakers around the world. In addition, students reinforce and expand their knowledge of other academic areas through interdisciplinary connections. Class activities include dialogues; discussions; readings; film viewing; computer activities; independent, paired, and group practice; essays; oral and written quizzes and tests; and performance tasks. For listening comprehension and improvement of their pronunciation students use computer-based applications.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 8

Spanish II

Course Code: ~Wor145

Description: Spanish II is a continuation of Spanish I. The course builds on the cultural knowledge and language acquired during the students' first year of study and furthers their understanding of Spanish. Class activities include dialogues; discussions; readings; film viewing; computer activities; independent, paired, and group practice; essays; oral and written quizzes and tests; and performance tasks.

Prerequisites: Permission Required: No

Grades: 8, 9, 10, 11,12 Credits: 8

Spanish III

Course Code: ~Wor150

Description: Spanish III is a continuation of Spanish I and II. The course builds on the cultural knowledge and language acquired during the students' prior years of study and furthers their understanding of Spanish. Class activities include dialogues; discussions; readings; film viewing; computer activities; independent, paired, and group practice; essays; oral and written quizzes and tests; and performance tasks.

Prerequisites: Permission Required: No