



CENTRAL CATHOLIC HIGH SCHOOL

ACADEMIC COURSE GUIDE

2018 - 2019

RELIGION

Course 112 UNDERSTANDING CATHOLIC CHRISTIANITY (Level 2)

Throughout this two-semester religious studies course, the students will study the person of Jesus Christ and begin the process of the Marist mission, “to make Jesus known and loved.” This course will look at the life, values and teachings of Jesus as a way to lead a meaningful life. Special attention will be given to Jesus’ life goal of bringing about the reign of God and living His example of showing special concern for the least favored. The material covered in this course will serve as a common backdrop for future courses in the Religious Studies curriculum. In addition, students will be introduced to the traditions/heritage of what it means to be part of a Marist heritage.

Course 122 HEBREW SCRIPTURES/CHRISTIAN SCRIPTURES (Level 2)

This two-semester program is required for all sophomores. In the first semester, students become familiar with the beginnings of monotheism and examine God’s relationship and covenant with the Chosen People, as well as Christianity’s Judaic roots. The course follows the history and development of Judaism by examining all of the historical, prophetic and wisdom literature in the Hebrew Scriptures. In the second semester, students become familiar with the life and message of Jesus Christ. By examining the Gospels, Epistles, and other books of Christian Scripture, theological themes such as revelation, service, and salvation are explored.

Course 132 MORALITY/SOCIAL JUSTICE (Level 2)

These two courses are required for all juniors. Morality is taken in the first semester and Social Justice is taken in the second semester. In the first semester, students are presented with a solid foundation in Christian principles and values and are given skills involved in moral decision-making. At the end of the course, students will be able to articulate and explain official Catholic teaching on major moral issues and will demonstrate the ability to formulate thoughtful analysis of moral issues. The fundamental belief underlying the second semester course is that Christian faith calls believers to practice justice. Students will be able to identify elements of a just world and be able to define characteristics in society that can influence the work that must be accomplished if justice is to prevail. Students will review the Church’s teachings on social justice and reflect on the lives of individuals who dared to challenge injustice while living the Gospel message. At the completion of this course students will be able to establish personal guidelines for living justly.

Course 142 CHRISTIAN LIFESTYLES (Level 2)

A second semester requirement for all seniors, this course is designed to help students understand and develop methods of dealing with the opportunities, challenges and developmental tasks facing them in young adulthood. The belief that underlies this course is that a Christian lifestyle is the optimal way to grow and develop. The course focuses on life themes that are common to four lifestyle paths—single life, married life, religious life, and ordained ministry. As students consider the developmental tasks of young adulthood and the four lifestyle paths, they will examine issues and choices in light of the Gospel and Christian tradition and consider Jesus Christ a role model who is fully human and alive.

Course 144 EXPLORING WORLD RELIGIONS (Level 2)

This one-semester, elective course for seniors will take a close look at the world’s major religions including Judaism, Islam, Hinduism, Buddhism, and Protestant and Orthodox Christianity. Students will study the beliefs, rituals, sacred texts and spirituality of these traditions. In addition, the cultural and historical context of each religion will be examined. Throughout the course students will compare these religions with Catholic Christianity in an effort to recognize what Catholics have in common with people of other faiths and in what ways Catholics differ in their understanding of Truth.

Course 146 FAITH AND VALUES IN THE MEDIA (Level 2)

This one-semester, elective course for seniors will focus on the essential elements of media awareness and literacy so as to enable and empower young adults to discern and evaluate the impact media and its message has on a Christian lifestyle. The students will study how media and the adults who control it have gone to great expense to connect with teen culture often at the expense of Christian faith and values. Students will be asked to demonstrate their understanding of media literacy and illustrate their ability to discern its effect on faith and values.

Course 147 FAITH AND REASON (Level 2)

This one-semester, elective course for seniors will explore the relationship between Christian faith and reason. Students will explore some of the traditional branches of philosophy such as metaphysics (the nature of reality), logic (the study of thinking) and ethics (the study of good and evil). Students will analyze the lives, work and ideas of philosophers such as Plato, Aristotle, Saint Augustine, Saint Thomas Aquinas and CS Lewis. Through reading, written work and class discussions students will be asked to develop their own responses to these thinkers and to demonstrate their understanding of the relationship between faith and reason.

Course 148 POVERTY, POLICY AND JUSTICE (Level 2)

This one-semester elective course for seniors will consider the causes (both personal and public) and the effects (on the individual, local, and global level) of poverty. Through use of articles, Church documents, personal accounts, guest speakers, and film, students will be challenged to confront their own conscience and spiritual beliefs in dealing with issues of poverty. Particular focus will be paid to domestic poverty, especially in the area of homelessness, and on global poverty in areas of crisis throughout the world. A field education project is included in this course.

Course 151 FACING HISTORY AND OURSELVES: THE HOLOCAUST & HUMAN BEHAVIOR (Level 2)

This one-semester senior elective course will have students explore the history, causes and aftermath of the Holocaust. Themes will be explored through a series of reading, videos, activities and reflections. Students will reflect on racism and social justice, as well as the importance of global awareness and their own potential for making a difference. Based on the curriculum developed and sponsored by Facing History and Ourselves in Brookline, MA, connections will be made to Catholic social teaching, St. Paul's image that we are all one body in Christ and our Marist call to reach out to the least favored.

Course 211 HONORS ENGLISH I (Level 1)

Requirements: Students qualify for this course based on the cognitive, verbal, reading, and language skills components of the entrance examination. Honors English I is an accelerated survey course in which students build skills in critical reading, process writing, grammar application, and vocabulary acquisition. Critical reading skills are developed through careful annotation and study of texts in several genres, including the following: short stories, poems of various length (including an epic poem), dramas, traditional novels, graphic novels, and non-fiction texts. The writing focus is on the development and structure of literature analysis, research, and on-demand essays. Students will learn how to properly find, evaluate, and utilize primary source evidence from literature and non-fiction sources (print and electronic). Instruction will also center on citing source material in MLA format. An in-depth study of grammatical forms, punctuation, and mechanics will be blended with writing instruction. Students increase their vocabulary through literature study and through a supplementary Vocabulary Workshop program. This course is best suited for those students who are able to work simultaneously on several projects and desire to work in an accelerated writing and literature program.

Course 212 ENGLISH I (Level 2)

English I is a survey course in which students build skills in critical reading, process writing, grammar application, and vocabulary acquisition. Critical reading skills are developed through careful annotation and study of texts in several genres, including the following: short stories, poems of various length (including an epic poem), dramas, and novels. While the writing focus is on the development and structure of the analytical essay, students will be introduced to the research process. Students will learn how to properly use primary source evidence for support in an essay and cite the sources in MLA format. An in-depth study of grammatical forms, punctuation, and mechanics will be blended with writing instruction. Students increase their vocabulary through literature study and through a supplementary Vocabulary Workshop program.

Course 215 LITERARY STRATEGIES (Level 3)

Requirements: This course is taken in conjunction with Course 218, English I. Students will be immersed in leveled reading to build proficiency in reading comprehension. Using both literary and informational text, the primary focus of the course will be to teach essential reading skills by developing specific reading strategies. This program is also designed to improve the student's written and oral communication skills.

Course 218 ENGLISH I (Level 3)

Requirements: This course is taken in conjunction with Course 215, Literary Strategies. This course introduces students to the principles of grammar, vocabulary, and writing development that are repeated and expanded upon throughout the remaining years of the English curriculum. Students will integrate newly learned grammar principles into their oral and written responses. Students will understand and acquire new vocabulary and use it correctly in reading and writing. Students will learn a variety of key concepts, skills, and strategies that will lead to improved comprehension and enable them to grow as readers. Students will be introduced to the basic elements of fiction and the major literary genres. Students will read both classic and contemporary fiction and nonfiction selections.

Course 220 AP SEMINAR: ENGLISH II (Level AP)

Requirements: This course is open to sophomores with an A or better average in the class, an A or better average in the writing component and the recommendation of the Honors English I teacher. Students will be required to complete the AP Seminar performance tasks during the Spring semester, and they must sit for the AP Seminar exam in May. Students will be expected to follow AP Seminar with AP Research the following year. AP Seminar: English 2 will engage students in cross-curricular conversations that explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Using an inquiry framework, students practice reading and analyzing articles, research studies, and foundational, literary, and philosophical texts; listening to and viewing speeches, broadcasts, and personal accounts; and experiencing artistic works and performances. Students learn to synthesize information from multiple sources, develop their own perspectives in written essays, and design and deliver oral and visual presentations, both individually and as part of a team. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision in order to craft and communicate evidence-based arguments.

Course 221 HONORS ENGLISH II (Level 1)

Requirements: Students who choose to participate in this program must have earned an average grade of B- or better in Honors English I (level 1). Students who receive a grade of A- or better in English I (Level 2) and wish to enroll in Honors English II must take a writing sample test. The results of this test will ultimately determine the placement of the student. This course expands upon the principles of grammar, vocabulary, critical reading and writing studied in Honors English I and serves as a pre-AP course to prepare students to take AP English Language and Composition, AP English Literature, or Honors English III as juniors. The course readings emphasize major works in American literature, but also build on the foundation of world literature introduced in Honors English I. Students will read 8 novels published between 1880 and 2016 (including novels written in dialect and prose poetry). The readings will also include the poetry of Langston Hughes, Robert Frost, Julia Alvarez, and Naomi Shihab Nye, a comedy by William Shakespeare, and a memoir from Kevin Roose. Studying the course material, students will write critical analyses, stylistic imitations, multi-modal papers, and complete a cross-curricular research project. The class requires students to engage in discourse, demonstrate proficient use of digital learning tools, and collaborate. Students who choose Honors English II are expected to be resourceful, creative problem-solvers who think critically and analytically.

Course 222 ENGLISH II (Level 2)

The English II curriculum is divided over two semesters. The first semester begins with a continuation of the survey-style curriculum introduced in English I. Students will be exposed to units of world literature, including the study of a Shakespearean play. In the second semester, students will begin a study of American literature, a course of study that continues into English III. Students will read and respond to short stories, poems, novels, and dramas that center on a theme such as "Race, Immigration, and Identity in America." The writing focus will continue to be on MLA-documented literary analysis essays. Students will also study rhetoric and compose on-demand analytical essays from prompts typically found on standardized tests. The vocabulary curriculum will continue with the *Vocabulary Workshop* series, and grammar instruction will continue with an emphasis on punctuation and mechanics.

Course 223 ENGLISH II (Level 3)

Requirements: Students who are enrolled in this program must have the recommendation of their English I instructor. This course will continue to build on the English I (level 3) program with a special emphasis on essay writing, grammar basics and vocabulary in context. Students study major works in American literature dating from the 19th century to the present, analyzing patterns and themes in literature and contemporary life. They are taught to make claims about the literature they read while providing the supporting details to support their claims.

Course 231 HONORS ENGLISH III (Level 1)

Requirements: Students who choose to participate in this program must have earned a grade of B- in Honors English II (level 1) or a A- or better in English II (level 2). Honors English III continues and expands upon the study of grammar, spelling, vocabulary, literature, and critical writing of sophomore year. The course traces the development of the American story through its Romantic, Realistic, Naturalistic, Modernistic, and Post-Modernistic forms. Students study and prepare approximately sixty stories for class and eight novels independently by roughly twenty-five American authors such as Hawthorne, Irving, Poe, James, Howells, Twain, Bierce, Melville, Crane, Chopin, Jewett, Freeman, Dreiser, Anderson, London, Norris, Hemingway, Fitzgerald, and Faulkner. The writing component of the course focuses on the reader-friendly critical essay; students write approximately six formal 3-4 page critical essays out of class in addition to numerous in-class timed writing assignments. At the end of the year, students complete a portfolio of their written work from throughout the year; the portfolio assignment comprises 40% to 50% of the final grade of the fourth marking period and is a course requirement. Average daily homework assignments require 60-90 minutes. The successful Honors English III student possesses a laudable work ethic, strong analytical and critical thinking skills, and a firm understanding of the formal elements of English grammar.

Course 232 ENGLISH III (Level 2)

This course again repeats and expands upon the principles of grammar, vocabulary, and writing development offered in English II. The course familiarizes students with the ways in which events in American history affect literature and culture in the United States and completes a two-year study of American literature. Through authors such as Hemingway, Porter, O'Brien, Bradbury, Vonnegut, Jackson, Ellison, and Capote, literary analysis and critical thinking are emphasized. In addition to the textbook material, students will read several book-length works of literature by Steinbeck, Fitzgerald, Wharton and Miller. The writing component of the course prepares students for collegiate writing by emphasizing process writing, paper structure and the development of one's voice. Students are required to write at least three formal 3-4 page essays ranging from analytical to persuasive essays. In addition to the writing and literature, students will gain a better understanding of the writing and critical reading sections of SAT through exercises including vocabulary in context study, critical reading skills and timed essays.

Course 235 ENGLISH III- EXPLORATIONS (Level 2)

English III Explorations again repeats and expands upon the principles of reading, grammar, vocabulary, and writing development offered in English II. The course familiarizes students with the ways in which events in American history affect literature and culture in the United States and completes a two-year study of American literature. Through authors such as Hemingway, Porter, Faulkner, Bradbury, Vonnegut, Jackson, Ellison, and Capote, the course emphasizes literary analysis and critical. In addition to the textbook material, students will read book-length works of literature by authors such as Steinbeck, Fitzgerald, Wharton, and Miller. The writing component of the course prepares students for collegiate writing by emphasizing timed writing, process writing, paper structure, and the continued development of one's voice through journal writing. Students are required to write three 3-4 page expository essays. In addition to the writing and literature, students will gain a better understanding of the writing and critical reading sections of PSAT and SAT through exercises including vocabulary study in context, review of grammatical structures, critical reading skills, and timed writing.

Course 280 AP RESEARCH (Level AP)

Requirements: Successful completion (3 or higher) of AP Seminar. This course does not fulfill the English requirement but is taken in conjunction with a junior English class. "AP Research allows students to deeply explore an academic topic, problem, or issue of individual interest. Through this exploration, students design, plan, and conduct a yearlong investigation to address a research question. In the AP Research course, students further develop the skills acquired in the AP Seminar course by learning research methodology, employing ethical research practices and assessing, analyzing, and synthesizing information. Students reflect on their skill development, document their processes, and curate the artifacts of their scholarly work through a process and reflection portfolio. The course culminates in an academic paper of 4,000 – 5,000 words (accompanied by a performance, exhibit, or product where applicable) and a presentation with an oral defense. Students who score 3 or higher in AP Seminar, AP Research and on four additional AP exams of their choosing will receive the AP Capstone Diploma." (College Board)

Course 240 ADVANCED PLACEMENT ENGLISH LANGUAGE & COMPOSITION (Level A.P.)

Requirements: Students who choose to participate in this program must have earned an A- in Honors English II (Course 221), a B+ in Honors English III (Course 231), or a B- in Advanced Placement English Literature and Composition (Course 255). Admission to this class requires the timely and successful completion of a summer assignment. This course provides extensive instruction and practice in critical analysis, synthesis, and writing in preparation for both the college experience and the Advanced Placement Examination in Language and Composition offered by the College Board. Through extensive reading, class discussion, and writing exercises, students examine the interaction between a writer and his or her audience, and the ways in which a writer's subject, purpose, and audience influence the choice of rhetorical strategies and devices. Course readings will focus on nonfiction with additional readings in fiction and drama. Students will read ten (10) texts independently and complete one of three reading journals on each text. Students read three (3) in first marking period, three (3) in the second marking period, three (3) in third marking period and one (1) in the fourth marking period. Class work centers on a collection of nonfiction essays in various rhetorical modes, as well as at least one Shakespearean tragedy and several other multi-modal texts and samples of both fiction and nonfiction. Students will complete written assignments on readings and must contribute to class discussions. Some of these assignments will be timed, in-class responses to an argument or prompt. Students complete an expository essay (5-6 pages) using primary sources, an argument essay (750 words or less) synthesizing several sources and manipulating rhetorical devices, and at least one imitative piece in the first semester. Students then complete a major multi-modal synthesis paper (6-8 pages) for second semester. Finally, students will complete a portfolio of work from throughout the course. A.P. English is a rigorous, demanding course. Students must be prepared to read 6-8 hours per week to complete course assignments. The course is open to both incoming juniors and seniors.

Course 255 ADVANCED PLACEMENT ENGLISH LITERATURE AND COMPOSITION (Level A.P.)

Requirements: Students who choose to participate in this program must have earned an A- in Honors English II (Course 221), a B+ in Honors English III (Course 231), or a B- in Advanced Placement English Language and Composition (Course 240). Admission to this class requires the timely and successful completion of a summer assignment. AP English Literature is an accelerated literary studies course designed to foster critical analysis and critical writing at the college level. Students will analyze texts from a variety of historical time periods (medieval age to 21st Century), cultural genres (British, American, Russian, Latino), and literary forms (novel, short story, drama, poetry). Focusing on techniques fiction writers use to create meaning, students will progress their analysis beyond a study of theme to a study of literary technique. Students will demonstrate learning through contributions to class discussions and through a variety of writing assignments and literature tests. While students will continue to write analysis essays outside of class, a heavy emphasis is placed on the in-class, on-demand essay. This course is best suited for students who enjoy analyzing, discussing, and writing about challenging, thought-provoking (and, sometimes, lengthy) texts.

Course 241 HONORS ENGLISH IV (Level 1)

Requirements: Students who earned a grade average of B- or better in Honors English III (level 1) or students with an average of A- or better in English III (level 2) are eligible to elect this course. This course completes the grammar, vocabulary, critical reading, and writing development begun in English I. Students will investigate several genres or themes by analyzing and responding to major works of classic and contemporary literature. Topics/Genres from previous years include: War, Romance, Good vs. Evil, Heroism, Difference, Comedy, Government, and The City. Students should be prepared to devote a significant amount of time to daily reading. To respond to the texts, students will engage in both teacher-led and student-led discussions. Students will write a series of reflective essays and a formal literature analysis or research essay per quarter, deliver presentations, and create media enriched projects. The year will culminate with a comprehensive research project that stems from a theme examined during the year. In addition, students will be responsible for learning new vocabulary words from the senior vocabulary book as well as retaining all words from the freshman, sophomore, and junior lists.

Course 242 ENGLISH IV – HEROES AND VILLAINS (Level 2)

This course repeats and expands upon the principles of grammar, vocabulary and writing begun in English I. In literature, students will be introduced to major British authors such as Chaucer, Shakespeare, Orwell, and Tolkien and the heroes and villains they created in their works. Major themes include good vs. evil, class, ambition, courage, greed, love, and corruption. Students will examine these themes and explore their relevance to current media and culture. In writing, special emphasis is given to the process and mechanics involved in creating a research paper. Students will master MLA citation format and the incorporation of outside sources into their own writing. The course culminates in a technologically enriched project that will prepare students for collegiate expectations in regards to research, writing, and presentation.

Course 243 ENGLISH IV – ADAPTATIONS (Level 2)

This course repeats and expands upon the principles of grammar, vocabulary and writing development begun in English I. The course materials are divided into a series of units that use a Humanities-based approach to learning. Each unit includes: class instruction in an aspect of American historical and cultural history, readings based on that era, and a film that is adapted from and reflective of that material. Assessments for each unit include analysis writing, reading comprehension quizzes and cumulative tests that reflect the entire unit. Students who opt for this class should be motivated by an interest in cultural history and the unique advantages and challenges that exist with adaptation. The writing program focuses on the research process: finding and validating sources, utilizing MLA citation format, and skillfully incorporating evidence into a structured document. The course will culminate in a multi-modal research project that reflects the student's ability to analyze a film, find and interpret research data, and present their findings to the class.

Course 246 ENGLISH IV – RACE AND GENDER ON THE PAGE, STAGE AND SCREEN (Level 2)

This is a Humanities-based course that will examine themes related to race and gender in the United States. Classroom lecture, readings, film analysis and discussion will be based on each theme and on applying the concepts to a modern issue/event. The final project, which will be completed during the 2nd semester, will include both a research-based paper and an oral presentation; it will serve as the final exam grade & meet the graduation requirement. Students who opt for this course should enjoy studying and discussing history and be comfortable sharing their views in a respectful manner.

Course 250 METHODS OF PUBLIC SPEAKING (Level 2)

Requirements: This elective course is open to juniors and seniors and must be taken in conjunction with an English III or English IV program. This course will offer students the opportunity to develop the necessary speaking and listening skills to meet the challenges of college and the workplace. Students will learn the stages involved in the major speech communication processes and master the mechanisms of speech production and delivery. Students will learn practical techniques for analyzing, evaluating, and improving their own speaking and listening skills and develop an introductory-level mastery of the major modes of speech communication: one-to-one communication, formal and informal group discussion, public address and oratory, debate, and oral interpretation.

Virtual High School Courses- English

The courses below are offered through the Virtual High School Collaborative. See “General Information” for more info. Individual classes may have requirements that are not listed below.

VHS Course 026- SHAKESPEARE IN FILMS (Level 1)

One Semester. Attention all movie buffs! Are you the kind of person who likes to talk about movies you've seen? Do you like to discuss why actors have performed scenes in certain ways? Do you get frustrated—or amazed—at the changes that are made when a story or play goes on the silver screen? If you've answered "yes" to any of these questions, then this is the class for you. We will read four Shakespearean plays—Romeo and Juliet, Much Ado About Nothing, Henry V, and Hamlet. We will then view a variety of scenes from these plays performed by many popular actors and actresses (Leonardo DiCaprio, Mel Gibson, Emma Thompson, Kenneth Branagh, are just some of them). The focus of our assignments will be discussions and compositions on choices the actors and directors have made and how those different choices lend different meanings to the plays.

VHS Course 028- TWENTIETH CENTURY WOMEN AUTHORS (Level 1)

One Semester. This English course will explore literature written by America's female novelists. We will begin the course with material written at the start of the twentieth century and trace its progression to the new millennium. Through research on the author's background and critical analysis of the writing, students will chronicle in historical context the changing role of women socially, politically, and economically.

VHS Course 020- FOLKLORE AND LITERATURE OF MYTH, MAGIC, AND RITUAL (Level 1)

One Semester. This English course will explore common elements in the literature of modern mythology, current folklore, and literature involving magic and the mystical. Students will read novels by Lois Lowry, Stephen King, Robert Cormier, and Toni Morrison. Students will research and analyze the phenomena described in the literature. Students will investigate and contribute legends/scare stories from their locales as the class conducts its investigation into the social purposes served by such modern folklore. The current obsession with the paranormal and alien visitation as it applies to modern myth and folklore will also be explored. Please note: The emphasis of this course is on modern folklore which, in an Information Age, is significantly different from historical folklore. It should also be noted that this is an Honors level English course. Students should be prepared to read, to write, and to discuss.

VHS Course 024- MYTHOLOGY: STORIES FROM AROUND THE WORLD (Level 2)

One Semester. Do you love mythology? Do you wish there was more of it than was introduced in your literature class? Well, this is the class for you! This course is designed to enhance your understanding of mythology and its continuing influence on our modern world. You will study mythology from various cultures, including Greco-Roman, Norse, and American Indian. We will examine how some themes and character types occur over and over in myths of different cultures. Reading, individual projects/activities, and group work will be part of this class. To enhance and inspire the writing process, students will complete weekly journal writing, and participate in a readers' forum where we will share writing and opinions in a friendly atmosphere. Together we will build a reference section where students can develop skills in the mechanics, usage, and grammar of the English language. You will have the opportunity to seek publication for your work. Writing assignments will be inspired by selections from contemporary American authors such as Maya Angelou, O'Henry, Gary Soto, Sherman Alexie, Sandra Cisneros, Martin Luther King Jr., Barbara Kingsolver, and Ralph Waldo Emerson, as well as poetry written by other high school students.

VHS Course 029- YOUNG ADULT LITERATURE (Level 2)

One Semester. Are you a free thinker? Are you open minded? Are you interested in your own life and the lives of other teenagers? In this course you will examine the issues and concerns of adolescence. You will have the opportunity to learn about your own heritage and the heritage of others. Through multicultural literature, you will read about and discuss the issues of poverty, prejudice, race, and ethnic pride. The main theme of this course is tolerance and diversity and the readings and activities will challenge you to think about the misconceptions and stereotypes related to various cultures.

VHS Course 022- CREATIVE WRITING FOR PEOPLE WHO MEAN IT (Level 2)

One Semester. The semester will begin with thought, reading, on-line discussion and writing about WHY people write, why bother to do imaginative writing when we can just turn on our TVs or access the Internet. Along the way, we'll try to decide: What is the fundamental impulse behind poems and stories? How are they constructed, and what techniques do particular writers use effectively? What kinds of work do we most admire and why? How can a poem or a piece of fiction speak to us across, years, genders, and cultures?

VHS Course 023- POETRY WRITING (Level 2)

One Semester. Writing assignments will be inspired by selections from contemporary American authors such as Maya Angelou, O'Henry, Gary Soto, Sherman Alexie, Sandra Cisneros, Martin Luther King Jr., Barbara Kingsolver, and Ralph Waldo Emerson, as well as poetry written by other high school students. To enhance and inspire the writing process, students will complete weekly journal writing, and participate in a readers' forum where we will share writing and opinions in a friendly atmosphere. The theme of this class is the celebration of diversity. Students at all levels will have the opportunity to improve their skills while writing about a topic that they know best: themselves.

VHS Course 013- SCREENWRITING FUNDAMENTALS (Level 2)

One Semester. This course is designed to equip students with the theory and structure of screenwriting so that they may mold their ideas into a professional product designed for the screen. Emphasis is upon the literary conventions of the form -- character, conflict, plot, dialogue -- as well as the technical elements which make scripts and screenwriting unique. Upon completion of the course, students should be able to conceive, develop, and craft their own original idea into a professional screenplay.

MATHEMATICS

Course 311 HONORS ALGEBRA I & 2 (Level 1)

Requirements: Students qualify for this course based on the Cognitive, Quantitative, and Mathematics skills components on the Central Catholic Entrance Exam or based on demonstrated proficiency on a Central Catholic placement test. This course covers all of the topics of Algebra I and introduces students to the further study of Algebra II with real life applications. Topics include functions and relations, complex numbers, and variations. Students are required to purchase a Texas Instrument TI 84 Plus Graphing calculator for use during this course. SAT preparation is introduced in this course.

Course 326 HONORS ALGEBRA II/HONORS GEOMETRY (Level 1)

Requirements: This course is an accelerated course for freshmen who have completed an Honors Algebra I program and have taken and demonstrated proficiency on a Central Catholic placement test. This is a fast paced course that covers Honors Algebra II in the first semester and Honors Geometry in the second semester. In this course students will study linear equations and functions, systems of equations and inequalities, quadratic functions, polynomial functions, radicals and complex numbers, rational expressions, an introduction to exponential and logarithmic functions and matrices. The second semester concentrates on the theorems associated with congruent triangles, similarity, parallelism, ratios, proportions, area and volume formulas and an introduction to trigonometry. Students who successfully complete this course will take Honors Precalculus as sophomores. Students are required to purchase a Texas Instrument TI 84 Plus Graphing calculator for use during this course. SAT preparation is introduced in this course.

Course 312 ALGEBRA I (Level 2)

This course introduces the student to the language of Algebra and also incorporates the study of equations and graphs as they apply to real life applications. Topics include algebraic expressions, equations in one or more variables, inequalities, polynomials, systems of linear equations, radicals, and quadratic equations. Students are required to purchase a Texas Instrument TI 84 Plus Graphing calculator for use during this course. SAT preparation is introduced in this course.

Course 313 ALGEBRA I (Level 3)

This course reviews and reinforces the basic fundamentals of arithmetic including integers, decimals and percents. It also incorporates the study of equations and graphs as they apply to real life applications. Topics include the uses of variables, solving equations in one and two variables, polynomials, inequalities, and radicals. Students are required to purchase a Texas Instrument TI 84 Plus Graphing calculator for use during this course. SAT preparation is introduced in this course.

Course 321 HONORS GEOMETRY (Level 1)

Requirements: Students who apply for this course must have a B- or better average in Honors Algebra I & II (Course 311), the recommendation of their teacher and demonstrated proficiency on the midterm and final exam. This course uses deductive reasoning practices to enable students to study theorems associated with congruent triangles, the similarity of geometric figures, parallelism, ratios, proportions and area, volume and surface area of geometric figures, as well as properties and theorems associated with angles, arcs, and their relationships with circles, and an introduction to trigonometry. Students will also continue to practice and develop their skills in applying the principles of Algebra II. This course includes SAT preparation for geometric topics. A Texas Instrument TI-84 Plus Graphing calculator is required for this course.

Course 325 HONORS GEOMETRY/ALGEBRA II (Level 1)

Requirements: Students must have an A- or better average in Algebra I (Course 312), the recommendation of their teacher and demonstrated proficiency on the midterm and final exam. Students who have a C average from Honors Algebra 1 & 2 (311) may elect this course. This is a fast paced course that covers Geometry in the first three quarters and Algebra II in the fourth quarter. In this course students will study and apply theorems associated with congruent triangles, similarity of geometric figures, parallelism, ratios, proportions, area, volume and surface area of geometric figures and an introduction to trigonometry. After a review of Algebra I, Algebra II topics will include the study of quadratic and polynomial functions, and irrational and complex numbers. This course includes SAT preparation for geometric topics and prepares students for Honors Precalculus (Course 331). A Texas Instrument TI-84 Plus Graphing calculator is required for this course.

Course 322 GEOMETRY (Level 2)

Requirements: Students must have a C- or better from Algebra I (Course 312) or an A- or better from Algebra I (Course 313), the recommendation of their teacher and demonstrated proficiency on the midterm and final exam. This course offers a systematic development of logical thinking with emphasis on geometric figures. Among the topics studied is the development of logical reasoning and proofs, the properties of geometric figures (specifically triangles and quadrilaterals) and parallel lines. Topics also include calculating area, surface area and volume of geometric figures. The use of trigonometric principles as they apply to right triangles and real life applications is introduced. This course includes SAT preparation for geometric topics. *A Texas Instrument TI-84 Plus Graphing calculator is required for this course.*

Course 323 GEOMETRY (Level 3)

This course will connect geometry concepts with algebraic ideas, reinforcing algebraic skills. Topics will include geometric figures, triangular relationships and quadrilaterals. Deductive and inductive reasoning is introduced early in the course so as to allow for the gradual development of proof. This course includes SAT preparation for geometric topics. *A Texas Instrument TI-84 Plus Graphing calculator is required for this course.*

Course 331 HONORS PRECALCULUS (Level 1)

Requirements: Students who apply for this course must have a B- or better average in Honors Geometry (Course 321), Honors Geometry/Algebra II (Course 325), or Honors Algebra II/Honors Geometry (Course 326), the recommendation of their teacher and demonstrated proficiency on the midterm and final exam. This course combines the appropriate use of technology with standard analytic techniques to provide a balanced approach to the study of Precalculus. It emphasizes the graphical, numerical, and algebraic approaches to analyzing functions and problem solving. SAT preparation is an integral part of this course. *A Texas Instrument TI 84 Plus Graphing calculator is required for this course.*

Course 332 ALGEBRA II & TRIGONOMETRY (Level 2)

Requirements: Students must have a C- or better average in Algebra I (Course 312) and Geometry (Course 322), the recommendation of their teacher and demonstrated proficiency on the midterm and final exam. The course reinforces topics studied in Algebra I. Other topics include: irrational and complex numbers, quadratic and polynomial functions, exponential and logarithmic functions, and trigonometric functions, graphs, identities and equations and an introduction to matrices. S.A.T. preparation is an integral part of this course. *A Texas Instrument TI 84 Plus Graphing calculator is required for this course.*

Course 333 ALGEBRA II (Level 3)

This course reviews Algebra I and expands on these concepts to study linear, quadratic and exponential functions and their applications to the real world. Other topics include inverse functions, irrational and complex numbers, absolute value equations and inequalities, analytic geometry and polynomials. Graphical and data analysis are applied whenever possible. SAT preparation is an integral part of this course. *A Texas Instrument TI 84 Plus Graphing calculator is required for this course.*

Course 340 ADVANCED PLACEMENT CALCULUS AB (Level A.P.)

Requirements: Students who apply for this course must have an A- or better average in Honors Precalculus (Course 331), the recommendation of their teacher and demonstrated proficiency on the midterm and final exam. Admission to this class requires the timely and successful completion of a summer assignment. This is a college level course intended for students who have a strong background in college-preparatory mathematics, including algebra, trigonometry, analytical geometry and precalculus topics. Topics studied include limits, continuity, differentiation, integration and their applications. This course prepares the student for the Advanced Placement Calculus Exam. *A Texas Instrument TI 83/84 Plus Graphing calculator is required for this course.*

Course 390 ADVANCED PLACEMENT CALCULUS BC (Level A.P.)

Requirements: Students who apply for this course must have completed Calculus AB (Course 340) or must have an A average or better in Honors Precalculus (Course 331) and complete a summer program of introductory calculus at Central Catholic High School. Admission to this class requires the timely and successful completion of a summer assignment. Calculus BC is a full year course in the calculus of functions of a single variable. It includes all the topics taught in Calculus AB plus additional topics such as analysis of and derivatives of parametric, polar, and vector functions, Euler's method, L'Hospital's Rule, application of integrals, antiderivatives by substitution of variables, parts, and partial fractions, improper integrals, solving logistic differential equations, polynomial approximations and series, and Taylor series. This course prepares the student for the Advanced Placement Calculus BC exam. *A Texas Instrument TI 83/84 Plus Graphing calculator is required for this course.*

Course 349 ADVANCED CALCULUS CD (Level A.P.)

REQUIREMENTS: Successful completion of AP Calculus BC or an A or better in AP Calculus AB. This course will cover infinite sequences and series and also extends the basic concepts of single variable calculus to functions of several variables. Topics include vectors, the geometry of space, vector valued functions, motion in space, partial derivatives, and multiple integrals. The order of topics in this course will allow students coming from AP Calculus AB to then take Advanced Calculus CD and still have the tools to take the AP Calculus BC exam in May.

Course 341 HONORS CALCULUS (Level 1)

Requirements: Students must have a C or better average in Honors Precalculus or an A average in Algebra II and Trigonometry (Course 332), the recommendation of their teacher and demonstrated proficiency on the midterm and final exam. Students from Algebra II and Trigonometry are required to attend summer school to complete the requirements for Precalculus. Students who attend the summer program must also have the recommendation of the summer school math teacher. In this applied Calculus course there is an abundant supply of examples and exercises using real-world data from business, economics, environmental studies, health care, and the life sciences. Topics include limits, continuity, differentiation, integration, and their applications. A Texas Instrument TI 83/84 Plus Graphing calculator is required for this course.

Course 347 INTRODUCTION TO CALCULUS (Level 2)

Requirements: Students must have a B+ or better average in Algebra II and Trigonometry (Course 332) or a D+ average or better in Honors Precalculus (Course 331), the recommendation of their current teacher and demonstrated proficiency on the midterm and final exam. Introduction to Calculus is comprised of a semester focused on Precalculus followed by a semester of basic Calculus. The semester of Precalculus completes the formal study of the functions begun in Algebra. Students focus on the use of technology, modeling, and problem solving involving data analysis, linear functions, their inverses, exponential and logarithmic functions, polynomial and rational functions, and quadratic relations. The introductory topics of Calculus include limits, continuity, derivatives, the definite integral, and their real-world applications. Students will model real-world situations involving rates of change. A Texas Instrument TI 83/84 Plus Graphing calculator is required for this course.

Course 344 PRECALCULUS: MODELING & APPLICATIONS (Level 2)

Requirements: Students who have a C- or better average in Algebra II & Trigonometry (Course 332) or an A average in Algebra II (Course 333) may elect to take this course. This course uses contemporary applications and the modeling process to teach and motivate students in a Precalculus course. The content of this course is comparable to College Precalculus (Course 345), but the approach is very different. Using real-world applications and mathematical models, students will explore multiple ways of representing mathematical ideas and applying them to practical cases. Students will develop data analysis and problem-solving skills that they will need in their future studies and career. This course emphasizes the graphical approach to mathematics and is focused towards enhancing the skills of a visual learner in the mathematics field. The course requires students to complete a number of projects and take-home lab assignments. The graphing calculator is used extensively to explore mathematical concepts and solve real life mathematical problems. A Texas Instrument TI 83/84 Plus Graphing calculator is required for this course.

Course 345 COLLEGE PRECALCULUS (Level 2)

Requirements: Students who have a C- or better average in Algebra II and Trigonometry (Course 332) may elect to take this course. This course is designed for those students with an interest in pursuing higher level math and science courses. The approach taken in College Precalculus is analytical in nature and stresses the theory and language of functions. This course covers advanced mathematical concepts in Precalculus. Topics include a review and extension of trigonometry, linear relations and functions, theory of polynomial equations, rational functions, complex numbers, exponential and logarithmic functions, matrices and determinants, and time permitting, sequences and series. A Texas Instrument TI 83/84 Plus Graphing calculator is required for this course.

Course 343 COLLEGE ALGEBRA (Level 3)

This course covers both introductory and intermediate Algebra topics and will provide a solid foundation for a college algebra course. Specific topics covered include polynomial factoring, linear and quadratic equations, inequalities, linear systems of equations and the study of exponential, logarithmic and trigonometric functions. This course includes SAT preparation during the first semester. A Texas Instrument TI 83/84 Plus Graphing calculator is required for this course.

Course 348 ADVANCED PLACEMENT STATISTICS (Level A.P.)

Requirements: Students who have a B or better in Honors Precalculus (Course 331) or who have completed an AP Calculus course (either Course 340 or Course 390) may elect to take this course. Admission to this class requires the timely and successful completion of a summer assignment. The purpose of the Advanced Placement (AP) course in statistics is to introduce students to the major concepts and tools for collecting, analyzing and drawing conclusions from data. Students are exposed to four broad conceptual themes: exploring data, sampling and experimentation, anticipating patterns, and statistical inference. Students will describe patterns and departures from patterns, plan and conduct studies, explore random phenomena using probability and simulation, estimate population parameters, and test hypotheses. This year-long course will prepare students to take the AP Statistics exam.

Virtual High School Courses- Math

The courses below are offered through the Virtual High School Collaborative. See "General Information" for more info. Individual classes may have requirements that are not listed below.

VHS Course 033- MATH & MODERN LOGIC (Level 1)

One Semester. Requirements: Completion or enrollment in Precalculus. The focus of this course is on the development of sound reasoning abilities while supporting a student's skills in applying logic to arguments and position statements in day-to-day life. Students taking this course will learn logical argument analysis, an integral part of mathematics and the scientific process, by examining arguments from both the current political environment as well as from historical speeches. This course is designed for any student who enjoys mathematics and is interested in understanding the connections between logic, mathematics, and everyday life.

VHS Course 031- NUMBER THEORY: PATTERNS, PUZZLES & CRYPTOGRAPHY (Level 2)

One Semester. Number Theory began as a playground for a few mathematicians that were fascinated by the curious properties of numbers. Today, it has numerous applications from pencil and paper algorithms, to the solving of puzzles, to the design of computer software, to cryptanalysis (a science of code breaking). This Number Theory course will cover topics such as the Fundamental Theorem of Algebra, Euclid's Algorithm, Pascal's Triangle, Fermat's Last Theorem, and Pythagorean Triples. We will finish the course with a linkage of Number Theory to Cryptography.

SCIENCE

Course 411 HONORS BIOLOGY (Level 1)

This course is designed for the highly motivated, science-oriented student. The course covers basic concepts of biology in depth and at an accelerated pace. Some of the topics include the structure and function of living things, the study of the genetic continuity and evolutionary development of life, an examination of the diversity and ecological relationships among living things and an overview of human anatomy and physiology. Intense laboratory work and independent project work are required components of this class. Students who successfully complete this course will be prepared to take Advanced Placement Biology in their junior or senior year.

Course 412 BIOLOGY (Level 2)

This course begins with the study and application of the scientific method. It continues with a molecular and cellular introduction to the structure and function of living organisms, followed by a study of patterns of heredity and genetics. The second semester of the course focuses on the process of evolution and the diversity of life, an exploration of the interrelationships that exist between organisms and their environment and human anatomy and physiology. Laboratory experiences reinforce key ideas presented throughout the course.

Course 414 BIOLOGY (Level 3)

Requirements: Students who are enrolled in English I (Course 218) and Literary Strategies (Course 215) must also enroll in Course 414. This process-driven course with a molecular and cellular introduction to the structure and function of living organisms, followed by a study of genetics and evolutionary development (in both plants and animals). The second semester of the course focuses on the diversity of life followed by an exploration of the interrelationships that exist between organisms and their environment. It concludes with human anatomy and physiology. Laboratory experiences and hands-on activities reinforce key ideas presented throughout the course.

Course 421 HONORS CHEMISTRY (Level 1)

Requirements: Students must have a B- or better in Honors Biology (411) and a B- or better in Honors Algebra I & II (Course 311) or an A- or better in Biology (Course 412) and an A- or better in Algebra I (Course 312). Students in Chemistry 421 should also be enrolled in a Level 1 Mathematics course. This course is designed for the highly motivated, science-oriented student. Honors Chemistry is a laboratory-based course which introduces the college bound student to the major concepts fundamental to understanding the structure and properties of matter. In this course students will develop skills in many laboratory techniques used in scientific study, critical thinking skills, and the ability to work independently. Some of the concepts covered include the properties of matter, atomic structure, the Periodic Law, chemical formulas, bonding and chemical equations, the solution process, gas laws, and acid-base relationships and chemical kinetics. Students will be required not only to understand the basic concepts behind these topics, but also perform mathematical operations analyzing data relevant to these areas and conduct laboratory experiments demonstrating and/or testing major chemical principles. Students who successfully complete this course will be prepared to take Advanced Placement Chemistry in their junior or senior years.

Course 422 CHEMISTRY (Level 2)

Requirements: Students must have a C or better in Biology (Course 412) and Algebra I (Course 312) or an A- or better in Biology (Course 414) and Algebra I (Course 313). Students in Chemistry 422 must also be enrolled in a Level 1 or Level 2 Mathematics course. Chemistry is an interactive course that allows students to explore and understand matter and its properties. This course covers the basic concepts of inorganic chemistry in a lecture/laboratory atmosphere. Some of the concepts covered include the properties of matter, atomic structure, the Periodic Law, chemical formulas, bonding and chemical equations, the solution process, gas laws, and acid-base relationships. Students will be required not only to understand the basic concepts behind these topics but also perform mathematical operations in analyzing data relevant to these areas and conduct laboratory experiments demonstrating and/or testing major chemical properties.

Course 424 CHEMISTRY (Level 3)

This course covers many of the same basic concepts of inorganic chemistry covered in Chemistry (422) but in a more conceptual format. Some of the concepts covered include the states and properties of matter, atomic structure, the structure of the periodic table, bonding, compounds and chemical reactions. Practical examples and applications as well as laboratory experiences will be provided throughout the course to demonstrate to students the importance of chemistry and chemical principles in everyday life.

Course 439 ADVANCED PLACEMENT PHYSICS 1 (Level A.P.)

Requirements: Students must have a B- average or better in Honors Chemistry (Course 421) or an A- or better average in Chemistry (Course 422) or Physics (Course 432). Students enrolled in Advanced Placement Physics 1 must also be enrolled in Honors Precalculus (Course 331). Admission to this course requires the timely and successful completion of a summer assignment. Students enrolled in this A.P. level course must take the AP Physics 1 Exam in May. Students will be required to attend lab/seminar classes from 7:00 a.m. – 7:50 a.m. as frequently as once every seven-day cycle. This course will focus on four major content areas: Newtonian Mechanics, Current Electricity, Harmonic Motion, and Sound Waves. Guided inquiry, laboratory activities and student centered learning are designed to foster the development of critical thinking skills and prepare the student to take a second-year physics program (AP Physics C) at Central Catholic.

Course 432 PHYSICS (Level 2)

Requirements: Students must have a C- or better in Chemistry (Course 422) or a B or better in Chemistry (Course 424). Students who enroll in this course must also be enrolled in Algebra II & Trigonometry (Course 332). This lecture/laboratory course is designed for the science-oriented student. It is intended to provide a firm introduction to many basic concepts of physics, thereby preparing the student for college level study. Topics presented include mechanics, sound, light, electricity and magnetism. Laboratory work is an integral part of the course.

Course 433 PHYSICS (Level 3)

Requirements: Students must have completed a chemistry course to enroll in this course. This lecture/laboratory course is designed to reestablish the student's knowledge of the scientific method and utilize it to solve problems and determine how things work from a physics perspective. Basic physics principles such as forces, motion, fluid mechanics, electronics, and light will be investigated and understood in the context of life experiences.

Course 441 HONORS HUMAN ANATOMY & PHYSIOLOGY (Level 1)

Requirements: Students must have a B- or better in Level 2 or Level 1 Biology & Chemistry, or an A- or better in Level 3 Biology & Chemistry. Open to seniors, this year long elective course is designed to increase the student's knowledge of and appreciation for the workings of the human body. Through examination of the major body systems and organs students will begin to recognize the importance of a healthy system that is in equilibrium with the surrounding environment.

Course 443 SCIENCE, TECHNOLOGY AND SOCIETY (Level 2)

Open to seniors, this year long elective course examines how science and society influence each other. Science literacy and communication will be emphasized as the class explores the nature of scientific enterprise, the development of the atomic bomb and its ramifications, the growth of the environmentalism movement and its cultural impact, and the application of bioethics. Students will develop communication skills through regular reading, writing and class presentation activities, engaging in both historical and contemporary scientific developments.

Course 444 ADVANCED PLACEMENT BIOLOGY (Level A.P.)

Requirements: Students who apply for this course should have a grade of B or better in Honors Chemistry (Course 421) or an A average or better in Chemistry (Course 422). Select juniors who have excelled (grade of B or better) in Honors Chemistry (Course 421) and are concurrently taking Honors Math (Course 331 or higher) are also eligible to take this course. Admission to this course requires the timely and successful completion of a summer assignment. Students will be required to attend lab/seminar classes from 7:00 a.m. – 7:50 a.m. as frequently as once every seven-day cycle as well as a Laboratory Practicum day during April Vacation. This college level course is designed to provide the student with an awareness and increased understanding of complex biochemical and biological principles. Content is presented from an evolutionary perspective with a focus on the "4 Big Ideas" as outlined by the College Board's AP Biology Curriculum Framework. Throughout the course there is an emphasis placed on an exploratory approach using science principles which are also outlined in the AP Biology Curriculum Framework. The course prepares the student to take the Advanced Placement exam in Biology.

Course 445 ADVANCED PLACEMENT CHEMISTRY (Level A.P.)

Requirements: Students who apply for this course must have a grade of B or better in Honors Chemistry (Course 421) and Honors Precalculus (Course 331) or an A or better in Chemistry (Course 422) and Algebra II and Trigonometry (Course 332). Select juniors who have excelled (grade of B or better) in Honors Chemistry (Course 421) and are concurrently taking Honors Math (Course 331 or higher) are also eligible to take this course. Admission to this course requires the timely and successful completion of a summer assignment. Students will be required to attend lab/seminar classes from 7:00 a.m. – 7:50 a.m. as frequently as once every seven-day cycle. AP Chemistry is the equivalent of a first year college level course. Aspects of quantum mechanics, aqueous reactions, stoichiometry, kinetics, equilibrium, thermodynamics, and electrochemistry will be discussed in detail. Significant laboratory work will be integrated into the course of studies. The course prepares the student to take the Advanced Placement exam in Chemistry.

Course 448 ADVANCED PLACEMENT PHYSICS C (Level A.P.)

Requirements: Students who apply for this course must have a grade of B or better in AP Physics 1 (Course 439) and a B or better in Honors Pre-calculus (Course 331). Students must also concurrently take AP Calculus AB (Course 340), AP Calculus BC (Course 390), or Honors Calculus (Course 341). Timely and satisfactory (grade of B- or better) completion of summer work is required. Students will also be required to attend lab/seminar classes (7:00 a.m. – 7:50 a.m.) as frequently as once every seven-day cycle. AP Physics C is the equivalent of a first year college level physics course for engineering and physics majors. Calculus is utilized for the entire course. In the first half of the year, topics include Electrostatics, Conductors, Capacitors and Dielectrics, Electric Circuits, Magnetic Fields, and Electromagnetism. In the second half of the year, topics include a deeper analysis of Newtonian Mechanics, Newton's Laws of Motion, Work, Energy and Power, Linear and Angular Momentum, Circular Motion and Rotation, and Oscillations and Gravitation. Laboratory work is an important part of the curriculum. This course prepares the student to take both the AP Physics C Mechanics exam and the AP Physics C Electricity and Magnetism exam.

Course 449 ADVANCED PLACEMENT ENVIRONMENTAL SCIENCE (Level A.P.)

Requirements: Students who apply for this course must have a grade of B or better in Honors Chemistry (Course 421) and Honors Precalculus (Course 331) or an A or better in Chemistry (Course 422) and Algebra II and Trigonometry (Course 332). Select juniors who have excelled (grade of B or better) in Honors Chemistry (Course 421) and are concurrently taking Honors Math (Course 331 or higher) are also eligible to take this course. Admission to this course requires the timely and successful completion of a summer assignment. Students will be required to attend lab/seminar classes from 7:00 a.m. – 7:50 a.m. as frequently as once every seven-day cycle. The AP Environmental Science course is designed to be the equivalent of a one-semester, introductory college course in environmental science, through which students engage with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world. The course requires that students identify and analyze natural and human-made environmental problems, evaluate the relative risks associated with these problems, and examine alternative solutions for resolving or preventing them. Environmental science is interdisciplinary, embracing topics from geology, biology, environmental studies, chemistry, and geography.

Course 451 HONORS FORENSIC SCIENCE (Level 1)

**OFFERED FOR DUAL ENROLLMENT WITH SYRACUSE UNIVERSITY* Information about the dual enrollment program can be found on the website under "Academics", "Course Catalogue", "Dual Enrollment".*

Requirements: Students must have a B- or better average in all previous level 1 or level 2 science courses or an A- or better in all previous level 3 science courses. Open to seniors, this lecture/laboratory course is offered in conjunction with Project Advance at Syracuse University. Taught by a Central Catholic science teacher, students who successfully complete this course and wish to take the course for dual enrollment may earn both Central Catholic credit and four (4) college credits. This course is focused upon the application of scientific methods and techniques to crime and law. Scientific methods specifically relevant to crime detection and analysis will be presented with emphasis placed upon the techniques used in evaluating physical evidence. Topics and laboratory exercises will include techniques commonly employed in forensic investigations with respect to blood analysis, organic and inorganic evidence analysis, microscopic investigations, hair analysis, DNA, drug chemistry and toxicology, fiber comparisons, paints, glass compositions and fragmentation, fingerprints, soil comparisons, and arson investigations, among others.

Course 455 ENGINEER YOUR WORLD (Level 2)

Requirements: Open to juniors and seniors. Students must have earned at least a C+ in prior level 2 science and math courses or a B in prior level 3 science and math courses. Engineer Your World is a hands-on high school engineering design curriculum for students who want to learn about engineering and its role in shaping our world. Students will engage in authentic engineering practices in a project-based environment and complete a series of socially relevant design challenges to develop engineering design skills and habits of mind. Engineer Your World covers the breadth of engineering fields and professions so that students can make informed decisions about pursuing engineering.

Virtual High School Courses- Science

The courses below are offered through the Virtual High School Collaborative. See "General Information" for more info. Individual classes may have requirements that are not listed below.

VHS Course 042- GENES AND DISEASE (Level 1)

One Semester. Requirements: Completion of a full year of biology. Human Genetics has many areas of expertise. This course will focus on four areas, (1) classical or Mendelian genetics, diseases where major effects are from a single gene, (2) multifactorial inheritance, continuous traits and discontinuous traits where several genes plus environmental factors are involved, (3) cytogenetics, diseases involving chromosomal abnormalities, and (4) mathematical genetics, including population genetics, linkage, and mapping.

VHS Course 049- ANIMAL BEHAVIOR AND ZOOLOGY (Level 1)

One Semester. Requirements: Completion of a full year of biology. This course explores the tremendous diversity of animal life and the interconnectedness of different animal species with each other and with humans. The first part of the course explores the classification and characteristics of all the animal phyla, with an emphasis on the evolution of animals and the adaptations that have allowed such diversity to flourish. The second part of the course focuses on many different animal behaviors (including human behavior). Students learn about different types of behaviors – from innate (genetic) behaviors to learned behaviors. The social interactions between animals will be covered in depth as we study courtship, aggression, altruism, and parental behaviors in animals. Students also discuss different careers in the animal sciences as a culminating activity, which should be of great interest to students who wish to pursue their love of animals as their professions. The course will utilize a number of interesting articles, discussions, virtual field trips, activities, videos, and projects to give a wider perspective of the animal kingdom and animal behavior.

VHS Course 041- ASTRONOMY PRINCIPLES (Level 1)

One Semester. Requirements: Completion of Algebra II. Physics is recommended but not required. This course is an introduction to astronomy. Students will learn how to observe the sky we see and how it appears to change over time. Then they will learn more about the planets of our solar system and the structure and life of stars. Lastly students will study the Milky Way galaxy as well as those beyond and end by looking to the future. Student will be evaluated on weekly contributions to discussions, reading assignments, regular observation assignments in their Sky Watch journal and other activities and assignments. Activities will involve virtual labs, web inquiries, and using planetarium software. There will be a mid-term and final project.

VHS Course 043- OCEANOGRAPHY: A VIRTUAL SEMESTER AT SEA (Level 1)

One Semester. Requirements: It is strongly recommended that students have a working knowledge of basic Algebra, Geometry, and Trigonometry. This is a survey course covering the basics of physical oceanography and marine biology presented in a fun and engaging format. There are no traditional tests. Students will be graded on their weekly assignments, which will include both individual and group projects. In lieu of a midterm or final exam, students will be expected to complete a major individual project each term. Prospective students need to be self-motivated and willing to work in a team environment. There will be a strong multimedia component to the course, and students will have the opportunity to choose from reading assignments that meet their comfort level. The course is fast-paced and rigorous. No prior knowledge of oceanography is expected.

VHS Course 094- BIOETHICS (Level 1)

One Semester. Requirements: Completion of a full year of biology. Are you prepared for a brave new world? Some say that the age that will come after the information age will be known as the age of biology. Already, we hear about euthanasia, stem cells, genes, genomes, and health care in the news almost nightly. The ethical issues that accompany these new technologies force us to reexamine what words like "humanity", "person", "respect", "fair", "justice", and "benefit" mean. This is a survey course covering various contemporary topics in bioethics, focusing on issues encountered in biomedicine, genetics and research. Areas to be studied include assisted reproductive technology, end-of-life decision making, gene therapy, genetically modified organism, stem cells and animal and human research. We will examine these issues from many sides, weighing the reasons people have for believing them with a mind towards forming a well-supported position and creating a brave new world in which we can all live in the age of biology.

VHS Course 091- PREVETERINARY MEDICINE (Level 1)

One Semester. Requirements: Completion of a full year of biology. Are you interested in becoming a veterinarian or a veterinary technician? Do you love animals and wish to learn more about them? Pre-veterinary Medicine will introduce you to basic vertebrate anatomy by covering the major systems of the body including the digestive, reproductive, skeletal, cardiovascular, respiratory, excretory, and integumentary systems. We will use examples from small animal medicine (dogs and cats although some large animal anatomy will be covered) and discuss medical problems that are commonly seen in veterinary offices. you will learn the diagnostic procedures that assist veterinarians in making appropriate diagnoses. You will follow cases from start to completion, brainstorming about potential causes of ailments, diagnoses and treatment options.

VHS Course 402- CLIMATE CHANGE (Level 1)

One Semester. Current and future generations will be forced to deal with the consequences of our Earth's changing climate. Understanding how life on Earth has been shaped by, depends on and affects climate, is essential for making scientifically informed and socially responsible decisions about our future. Focusing on real-world case studies, this honors level course encourages students to question the cause and effects of climate in the world around them and then explore the science associated behind those questions. This class focuses student learning on better understanding Earth as a dynamic system and then challenges students to evaluate how certain factors are connected to and ultimately impact this system. The course curriculum is anchored in the scientific investigation of Earth's energy budget, carbon chemistry, paleoclimatology and climate data sources. Through this science, students have the opportunity to interpret current research and evaluate the latest news and then work together to investigate decision-making processes around public policy that will impact their future. A major project in this course allows each student to research and evaluate a specific climate change impact story of their choice. Across both terms, course assignments guide students to develop a comprehensive climate report that ultimately can be shared publically. Students are given the opportunity to demonstrate their expertise and advocate for those in their report via public policy proposal as they participate in a climate congress at the end of the course. Students will take away from the course newfound knowledge and confidence that will allow them to communicate about climate issues in meaningful ways.

VHS Course 090- BIOTECHNOLOGY (Level 2)

One Semester. Requirements: Completion of a full year of biology. Biotechnology is a course designed to familiarize you with these current innovative technologies based on our use of the DNA molecule. You will examine the opportunities and challenges that these abilities have created for us all. You will look at the techniques that are used in biotechnology and will also see just what kind of work modern biotech companies are involved in.

VHS Course 048- ENGINEERING FOR SUSTAINABLE ENERGY (Level 2)

One Semester. Requirements: Level 1 physics and algebra are desirable, but not essential. The class begins and ends with the following problem: "Global energy use is projected to increase hugely over the next few years, and will continue to have major impacts on the environment and the economy around the world. How can science and engineering be harnessed to better manage energy use in our society?" The class will look at this problem using a variety of skills and concepts from the worlds of engineering, math and science. We will explore concepts of sustainability, thermodynamics, design, statistics, public opinion, and much more on this journey to better understand the nature of the problem, and how to go about solving it. Level 1 Physics and Algebra are desirable.

VHS Course 044- EPIDEMICS: ECOLOGY OR EVOLUTION (Level 2)

One Semester. Requirements: Completion of a full year of biology. This course will focus on the biology of epidemics. One of the most fascinating and frightening aspects of disease, epidemics are known to have affected civilizations, medicine, and human interactions since the beginning of written history. Today, our battle against epidemic diseases continues, despite medical successes and our improved understanding of the causes and process of disease. Indeed, exotic new diseases are emerging, and those considered controlled are re-emerging in more virulent, resistant forms. News reports are documenting outbreaks of strange diseases in both underdeveloped regions and those with the highest levels of medical care.

VHS Course 046- METEOROLOGY: A STUDY OF ATMOSPHERIC INTERACTIONS (Level 2)

One Semester. Earth's weather and climates have influenced and continues to influence daily human events as well as human history. We are inundated daily with accounts of weather good and bad. Our daily activities depend, a great deal, on the weather. Weather phenomenon, such as hurricanes, floods and tornadoes have caused loss of life and damage of property. Loss of food crops has resulted from drought or extremes of temperature. We cannot fly a plane, have soldiers jump out of planes, or, for that matter, fight a war without consulting meteorologists to see what the weather is supposed to be on any given day. The Persian Gulf War and the Iraqi Freedom War were all planned according to the weather. Our forces were not sent into fight or even to bomb targets until the meteorologists were consulted and the okay was given for those in charge to begin the fight. This class is designed to introduce you to the basic factors of weather/meteorology and to engage your natural curiosity in it.

VHS Course 401- NUCLEAR SCIENCE (Level 2)

One Semester. Using a multi-disciplinary exploration, students will gain a solid understanding and appreciation of the scientific, technological, and societal implications arising from nuclear science. Students will explore science topics including the history of nuclear discovery, types of nuclear reactions, interactions between radiation and matter, the standard model of subatomic matter and current research. Weekly discussions on controversial nuclear topics allow students to understand and appreciate the societal implications of the expanding field of nuclear science. Discussions during the course will also include topics that have made recent headlines; such as nuclear reactors in space, the theft of nuclear secrets, food irradiation and nuclear test ban treaties. A final student-created project will allow students to demonstrate their understanding of the topics presented over the semester.

SOCIAL STUDIES

Course 511 HONORS EUROPEAN CIVILIZATION (Level 1)

This course presents an in depth study of the highlights in the development of Western Europe from ancient Greece and Rome to the Age of Imperialism. In addition to providing a narrative of events and historic movements, this course will also challenge students to develop historic writing and source analysis, understand global exchange, identify causality and encourage innovation and communication. The major themes studied are: the Classical Era, the Middle Ages, the Renaissance and Reformation, Expansionism, Scientific Progress, the Age of Democratic Revolution, the rise of Industrialism and European Imperialism.

Course 512 EUROPEAN CIVILIZATION (Level 2)

This course presents highlights in the development of Western Europe from ancient Greece and Rome to the Age of Imperialism. The goal of the course is to develop a student's sense of the historical and cultural heritage that we possess as citizens of the Western world. The major themes studied are: the Classical Era, the Middle Ages, the Renaissance and Reformation, Expansionism, Scientific Progress, the Age of Democratic Revolution, the rise of Industrialism and European Imperialism.

Course 513 EUROPEAN CIVILIZATION (Level 3)

This course presents highlights in the development of Western Europe from ancient Greece and Rome to the Age of Imperialism. The goal of the course is to develop a student's sense of the historical and cultural heritage that we possess as citizens of the Western world. The major themes studied are: the Classical Era, the Middle Ages, the Renaissance and Reformation, Expansionism, Scientific Progress, the Age of Democratic Revolution, the rise of Industrialism and European Imperialism. Special emphasis will be given to reading, study, and time management skills. Instructional strategy and class assessments will be adjusted to differentiate instruction in order to help students read, write and comprehend more successfully in the content area.

Course 520 MODERN WORLD/ AMERICAN CIVICS: HISTORY & RESPONSIBILITIES (Level 2)

In the first semester sophomore year, students will study the 20th and 21st Century world history. The focus will include the social, political, constitutional, cultural, economic, and diplomatic forces that shaped events. Specific topics will include current events, global connectedness, and world revolutions.

In the second semester sophomore year, students will review the role the events leading up to the American Revolution had in the creation of a new government. Students will examine the impact of early American history and presidencies along with the US Constitution. Students will identify the Constitution's rights, protections, privileges and responsibilities of its citizens. Students will be able to describe the structure and real world operation of the local, state and federal government. Students will also examine actual local and state government issues which impact the lives of residents today in their communities.

Course 527 HONORS MODERN WORLD/ PRE-ADVANCED PLACEMENT UNITED STATES HISTORY (Level 1)

Requirements: Open to sophomores who have obtained at least an A- average in European Civilization (Course 512) or a B average in Honors European Civilization (Course 511). Students must retain their European Civilization text from freshman year for the first semester of this course. In the first semester sophomore year, students will study selected regions of the world. The focus will include the social, political, constitutional, cultural, economic and diplomatic forces that shape each of these world areas in the 20th and 21st century. Specific topics will include current events, global connectedness, revolutions in China and Russia and the Middle East conflict. In the second semester sophomore year, students will begin the first of a three-semester course in United States History and civics education. This course is a Pre-AP program to the Advanced Placement United States History course offered in junior year. Students will focus in depth on the colonial experience, the rise of the American Revolution and the age of the Constitution, the Federalist Era and end with the Age of Jackson. Civic literacy, critical thinking and the ability to write cogent historical essays will be major factors in student assessment in this course.

Course 530 ADVANCED PLACEMENT UNITED STATES HISTORY (Level A.P.)

Requirements: Open to juniors who have received a grade of B or better in Pre-Advanced Placement United States History (Course 529). Admission to this course requires the timely and successful completion of a summer assignment. This two-semester course is designed to provide students with analytical skills and factual knowledge necessary to deal critically with the problems of American History. In the first semester, students will study the Antebellum era, the coming of the Civil War, the era of Reconstruction and the forces that produced twentieth century America. Students will probe the Age of Reform and the America's involvement in WWI. In the second semester, students will examine the Roaring Twenties, the onset of the Great Depression, the New Deal, the challenges of the Second World War, the emergence of the Cold War, the divisive era of civil rights, the war in Vietnam, and the forces behind the politics and policies of our time since 1975. The course aims to develop the skills necessary to present ideas clearly in essay form and to prepare students for the Advanced Placement Examination.

Course 531 HONORS AMERICAN HISTORY (Level 1)

Requirements: Open to juniors who have a grade of B- or better in Honors Modern World/Pre-AP US (Course 527) or an A- or better in Modern World/Civics (Course 520). Honors American History is a course for academically talented and motivated students. The junior year course is a survey of highlights in American History from the early republic to modern times focusing on critical thinking and writing skills as well as factual knowledge. The course requires the student to make use of primary source materials and historical works outside the basic textbook.

Course 532 AMERICAN HISTORY (Level 2)

This junior-year course is a survey of highlights in American History from the early United States to modern times. Topics covered during the fall semester include the development of the new nation; major 19th century reform movements; the Civil War and Reconstruction periods; the culture of oppression for African Americans, Native Americans, immigrants, and women; industrialization, urbanization, and immigration of the late-1800s; and the Progressive Movement of the early-1900s. The spring semester focuses on the growth of the United States as a global power; international conflicts such as the World Wars, Cold War, and Vietnam War; materialism and consumerism in the 1950s, the Civil Rights and Women's Rights movements; the rise of conservatism in the 1970s and 80s; and essential challenges of the modern era including race relations, the threat of global terrorism, and economic progress.

Course 540 ADVANCED PLACEMENT US GOVERNMENT & POLITICS (Level A.P.)

Requirements: Students must have earned a C+ or better average in AP United States History (Course 530) or Honors American History (Course 531), or a B+ or better average in American History (Course 532). Admission to this course requires the timely and successful completion of a summer assignment. This year-long course studies in detail the origins of the Constitution, the three branches of American Government (the executive, legislative, and judicial), the Cabinet, special interest groups, foreign policy and the role of the citizen in the political process. This course prepares students to take the A.P. US Government and Politics exam.

Course 542 PSYCHOLOGY (Level 2)

Open to seniors, this two-semester course in the study of human behavior investigates the methods associated with psychological research and testing, and goes on to explore the brain, sensation and perception, sleep, dreams, rhythms and human development. Students will also examine the areas of learning and conditioning, thinking, memory and intelligence. Psychological disorders and approaches to treatment will be viewed in light of current research. Students will study the major theories of personality and explore how individuals and the societies in which they live influence each other's behavior.

Course 551 MODERN GLOBAL HISTORY (Level 2)

Requirements: Open to seniors, this one semester course must be taken in conjunction with Criminal Justice (Course 548). In Modern Global History, students will examine the way governments around the world influence people's lives and international diplomacy. Specific attention will be paid to Europe, Asia, and the Middle East. Current events will inspire specific curriculum focuses throughout the semester.

Course 548 CRIMINAL JUSTICE (Level 2)

Requirements: Open to seniors, this one semester course must be taken in conjunction with Modern Global History (Course 551). This course will examine the practical applications of various bodies of law within the American legal system. The class will focus primarily on criminal law and procedures while incorporating topics such as civil law, the legal profession, American judicial structure, judicial decision making and legal reasoning. Students will study specific legal cases, the US Constitution, state statutes and the impact these have on individuals. Class discussion, mock trials and hypothetical analysis as applied to law will be strategies employed throughout the course.

Course 549 ADVANCED PLACEMENT PSYCHOLOGY (Level A.P.)

Requirements: Students must have earned a C or better average in AP United States History (Course 530) and AP English (Course 240 or Course 255) or a C+ or better in Honors American History (Course 531) and Honors English III (Course 231) or a B or better average in American History (Course 532) and English III (Course 232). Admission to this course requires the timely and successful completion of a summer assignment. Advanced Placement Psychology introduces students to the scientific study of behavior and mental processes of humans and other animals. The first semester focuses on scientific methodology, anatomy and physiology, sensation and perception and other biological processes as they pertain to human behavior. There will also be a focus on psychological theories, principles and phenomena associated with the major sub-fields within psychology. Content also includes the history of psychology, schools of psychological thought and major theorists. This course prepares student to take the Advanced Placement exam in Psychology.

Course 552 HONORS WITNESSES TO HISTORY (Level 1)

Requirements: Students must have earned a C average or better in all previous Social Studies courses. Honors Witnesses to History is a biography course focused on three major historical periods in the 20th century. Students will read three biographies of individuals who experienced each period firsthand. The focus of the class is to get a comprehensive view of each historical period with particular focus on the political, social and economic ramifications. Students will write weekly reflections and analysis of reading assignments. The final project is for students to write a biography including outside interviews and sources to be published as a class text.

Course 554 AMERICAN CITY: RISE, FALL, REBIRTH (Level 2)

This full-year, senior Social Studies elective focuses on the urban and suburban history of the United States from the early-1800s to the Present. Students will have the opportunity to work closely with local historians and community leaders, particularly regarding the history of the City of Lawrence. Major topics addressed in this course include: public health and epidemics, urban disasters and public safety, labor movements and strikes, organized crime and political corruption, suburbanization, gentrification, and gang violence.

Virtual High School Courses- Social Studies

The courses below are offered through the Virtual High School Collaborative. See "General Information" for more info. Individual classes may have requirements that are not listed below.

VHS Course 052- AP WORLD HISTORY (Level AP)

Full Year. This is a college level history course designed to meet the needs of highly motivated students who have a strong interest and ability in history. The program prepares students for intermediate and advanced college courses by making demands upon them equivalent to those made by full-year introductory college courses. The student is expected to read and analyze both primary and secondary source materials and to demonstrate ability to interpret and evaluate these sources in essay form. Students will take the Advanced Placement World History exam in May, as preparation for this exam is a major goal of this course.

VHS Course 096- AP HUMAN GEOGRAPHY (Level AP)

Full Year. The AP Human Geography course, designed to meet the needs of highly motivated students, is organized around the major themes of human interactions within a shared world that considers the questions, where and why. Where do people live and why or how do cultures influence human behavior? Students will study the elements of sociology, anthropology, religion, politics, economics, and psychology that help students understand how to make sense of others and themselves in a locality, region and the world. The course is offered at a college level class and will require rigorous work and effort. Students should expect to complete a variety of readings, writings, and practice exams as well as to participate in many discussions and activities. It is expected that students will take the Advanced Placement Human Geography exam in May, as preparation for this exam is one of the major goals of the course. The course will introduce students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students will employ spatial concepts and landscape analysis to examine human social organization and its environmental consequences. They will also learn about the methods and tools geographers use in their science and practice. The seven topics include Geography: Its Nature and Perspectives, Population, Cultural Patterns and Processes, Political Organization of Space, Agriculture and Rural Land Use, Industrialization and Economic Development and Cities and Urban Land Use. A significant outcome of the course is students' awareness of the relevance of academic geography to everyday life and decision making. This combination of the academic and the applied gives students a sophisticated view of the world and an understanding of the manifold applications of what they have learned in the course.

VHS Course 051- AP EUROPEAN HISTORY (Level AP)

Full Year. Enrollment in this course requires the successful completion of a summer assignment. AP European History is a rigorous academic course that furnishes a basic narrative of events and movements in European History from 1450 to the present. Students will investigate the broad themes of intellectual, cultural and political history and will appreciate how those ideas are reflected in trends of philosophy, popular literature and the arts. As events in history can only be understood in terms of their social context, this course will examine demographics and the influences of social classes and gender roles on history. The course will also focus on economic history and the role of industrialization by reviewing the development of commercial practices and changing economic structures to recognize Europe's influence on the world.

VHS Course 005- PSYCHOLOGY OF CRIME (Level 1)

One Semester. Students will learn how psychology applies to questions and issues relating to law and the legal system. The course will include all aspects of the legal system including police, the trial and corrections. Topics will include: recovered memories, children as victims and offenders, violence and murder, strategies for interviewing witnesses, expert testimony, and factors influencing the credibility of witnesses, victims and offenders and insanity. Students will also examine the relationship of psychology and law in the educational and work settings.

VHS Course 057- CRIMINOLOGY (Level 1)

One Semester. Have you ever been fascinated by a crime story and wondered: How could somebody commit such an unspeakable act or how could someone who seemingly has everything throw it all away doing something illegal? Does a person's environment increase the likelihood of becoming a criminal or is criminality an inherited trait? The course, Criminology, will explore the reasons why people commit crimes. To better understand these reasons, we must first examine why laws were created and how they have evolved over time in response to society's needs. The main focus of the course will be the theoretical perspectives of criminal behavior, including biological, psychological and sociological theories. We will discuss the indicators of dangerousness in predicting criminal behavior, as well as the competency standards for involvement in the legal process. Finally, we will explore the treatment of criminals by the correctional system.

VHS Course 059- EASTERN & WESTERN THOUGHT (Level 1)

One Semester. Students will examine great thinkers of the East and the West, from ancient to modern times. Students will read selections from works such as the Bhagavad Gita and the I Ching as well as read excerpts by philosophers such as Buddha, Lao-Tse, Muhammed, Gandhi, Socrates, Locke, Rousseau, deBeauvoir, and Marx. All reading will be "on-line." Students will also use the Internet for discussion and course work, including research and other activities. A key theme of the course will be to examine the similarities and differences between Eastern and Western thinkers. Students will conclude the course with individual research and preparation of a project about a "thinker" of their choice.

VHS Course 093- THE GLORY OF ANCIENT ROME (Level 1)

One Semester. Come explore the "Eternal City" –Rome—which rose from a small village in central Italy to become mistress of one of the largest and longest lasting empires in all of history. Stretching from England to Syria, the Roman Empire persisted for centuries and laid the foundation for all of the rest of Western history. We will examine in detail some of the major accomplishments of ancient Roman art and literature and investigate how this society was able to create and maintain its amazingly durable cultural institutions. This honors-level course covers the equivalent of an undergraduate Classics survey class. In it we will read (in translation!) selections from original Latin texts, take (virtual!) tours of Rome and of some of the other major archaeological monuments of the Roman Empire, and engage in active online discussions and group work as we reflect on what we read and see.

VHS Course 502- MODERN MIDDLE EAST (Level 1)

One Semester. This course explores the history of the Middle East (focusing primarily on the last century), and examines the relationships within the region and beyond. Topics of study include the development of Islam, the impact of imperialism, the rise of nationalism, the effects of British and French rule, Arab-Israeli relations, and the political and economic impact of oil.

VHS Course 055- PEACEMAKING (Level 2)

One Semester. Peacemaking is about power. It is about realizing and utilizing your personal power, by recognizing that there are alternatives to violence and to a "win-lose" philosophy of life. Peacemaking is an active process, not a passive exercise. Peacemaking is an interdisciplinary course exploring Peace and Peacemaking in four interrelated ways - the personal, interpersonal, communal and global. Through exploration, evaluation, reflection and discussion we will better understand our own roles and responsibilities as peacemakers. Topics covered will include: service for the sake of peace, forgiveness, understanding, contemplation, philosophies of non-violence, and peacemakers past and present among the Nobel Peace Prize Laureates. Readings include works by Thich Nhat Hanh, Martin Luther King, The 14th Dalai Lama, Mohandas Gandhi, Simon Wiesenthal and others. Projects will include a Peace Offering and creation of a multimedia project: assembling Pieces of Peace.

VHS Course 053- SOCIOLOGY (Level 2)

One Semester. Sociology students examine the influence of society, the groups we belong to, and institutions like government, family, education, religion, media, etc. on human behavior. We use popular movies and contemporary events, plus research, as the foundations for class discussions of issues such as crime and who defines criminal behavior and the legal response to it; gender inequality in the workplace; and the impact of media on violence and sexual behavior. Poverty and minority groups are discussed with a focus on how being a person of color shapes one's opportunities and life chances. Learners are exposed to the possibility of community-wide responses to social problems, instead of the "fix the individual" approach. Learners will also experience the scientific method of studying society, through design and execution of a survey and interpretation of results.

VHS Course 004- WORLD CONFLICT: A UNITED NATIONS INTRODUCTION (Level 2)

One Semester. "World Conflict" looks at how nations of the world seek to resolve issues through dialogue and action at the United Nations. Students will be assuming the roles of representatives of different member countries of the United Nations Security Council. Students will seek to resolve issues in different committees by writing and debating resolutions created in the UN format. Issues under consideration are in the areas of human rights, disarmament, economic and social marginalization, and environmental degradation. Resolutions will be voted on in a General Assembly style meeting. During this time the membership will also seek to pass a Security Council resolution to solve a world crisis that happens to arise during the course.

VHS Course 050- SPORTS & SOCIETY (Level 2)

One Semester. This course will focus on the evolving role of Sports in American Society. Students will examine the history of sports and its relationship with race, gender, economics & politics in the United States. Additional topics will include: pressures of sports from adolescence through college, supplement & drug abuse, violence in sports, and exploring sport-related careers. Students will also develop skills in historical research, analysis, and interpretation. Students will be expected to participate in a variety of activities including: weekly discussions about required reading and current events, online field trips, research projects, and group activities.

VHS Course 015- THE HOLOCAUST (Level 2)

One Semester. To properly understand the Holocaust, students will investigate the historical conditions that allowed the rise of Hitler in Germany. We will study the use of propaganda in creating the Nazi Regime. Two books will be read: *Night* by Elie Wiesel and *All But My Life* by Gerda Weismann Klein, both authors being Holocaust survivors. Our readings will reveal how life changed for those marked by the Nazis as undesirable and how the "Final Solution" was played out in the concentration camps. We will take a virtual tour of the U.S. Holocaust Museum. Students will develop a final oral history project around an actual interview with a Holocaust survivor. Students will be engaging fundamental questions about human nature, prejudice and violence, since the terror of genocide continues to be with us.

WORLD LANGUAGES

Course 651 HONORS MANDARIN CHINESE I (Level 1)

This course provides an introduction to the most widely spoken native language in the world, Mandarin Chinese. Students will learn the standard Chinese and simplified writing system that is used in education and all official communication throughout Mainland China. The course will include the development of basic conversational expressions emphasizing pronunciation and tone, the building of vocabulary and the incorporation of verbal structure into oral communication. Basic elements of grammar, syntax, and structure will reinforce speaking abilities. Students will also learn the building blocks (radicals) of Chinese characters. The Chinese Mandarin course is a combination of Chinese language acquisition and culture.

Course 653 HONORS MANDARIN CHINESE II (Level 1)

Requirements: Students must have successfully completed Mandarin Chinese I (Course 652). This course represents a continuation of Chinese 1 but will move at a faster pace as students continue to build upon the skills and knowledge of the writing system, vocabulary, grammar, listening and reading skills of the previous year. Students will also be held to a higher standard of correctness both with regards to writing and pronunciation. At the completion of the second year, students will be able to competently discuss many new topics, give their own opinions, and use everyday language necessary for meaningful exchanges in Chinese. At the end of the second year students will be able to read, write, and recognize at least 400 characters in Chinese. An increased number of assessments will be based on oral presentations and compositions in Chinese.

Course 654 HONORS MANDARIN CHINESE III (Level 1)

Requirements: Students must have successfully completed Honors Mandarin Chinese II (Course 653). In this course, students will continue to expand their vocabulary more rapidly as they begin a more intense interaction with the written word through pieces of short fiction. In this course students will begin to express themselves ever more competently in Chinese, as this will be the basis of nearly all classroom exchange. In addition to further developing their language skills, students will develop and maintain awareness of certain current events in China as they occur in real time.

Course 656 HONORS MANDARIN CHINESE IV (Level 1)

Requirements: Students must have successfully completed Honors Mandarin Chinese III (Course 654). This course continues and expands the themes and skills developed in Honors Mandarin Chinese III (Course 654). At this advanced level, the basic language skills of listening, speaking, reading, and writing will be clarified and refined. Students will continue to develop an understanding of Chinese language and culture through conversation, literature, media, the advanced study of grammar, and composition, with attention to both written and oral communication.

Course 611 HONORS SPANISH I (Level 1):

Students will be placed in this course based on their performance on a Central Catholic High School placement exam. In Honors Spanish I students will study the language and culture of the Spanish-speaking countries through listening, writing, reading and speaking activities. The course will begin with a review of basic, essential grammar and vocabulary, and then move to introducing more advanced grammar, vocabulary, and communication skills. The goal of this course is to give students a strong foundation in the language and to gain an understanding of different cultures.

Course 612 SPANISH I (Level 2)

In Spanish I students will be introduced to the language and culture of the Spanish-speaking countries through listening, writing, reading and speaking activities. Grammar and vocabulary will be extensively emphasized. The goal of this course is to enable students to communicate effectively at basic levels and to gain an understanding of different cultures.

Course 613 SPANISH I (Level 3)

Requirements: This course is open to sophomore students entering their first year of world language studies. In Spanish I students will be introduced to the language and culture of the Spanish-speaking countries through listening, writing, reading, and speaking activities. Grammar and vocabulary will be presented in a manner that allows students to review and build connections from English vocabulary and grammar. The goal of this course is to enable students to communicate in Spanish using basic language structures and to gain an understanding of different cultures.

Course 615 HONORS SPANISH FOR HERITAGE SPEAKERS I (Level 1)

Requirements: Placement will be based on the student's performance on a placement exam and linguistic proficiency. This course is open to all students who meet the minimum linguistic proficiency of the heritage language, regardless of their racial or ethnic background. Spanish for Heritage Speakers I is a language arts approach based, intermediate-mid Spanish course designed to strengthen a student's existing language proficiency through reading and writing. Students will continue to develop their listening, speaking, reading, and writing skills through practice of interpersonal, interpretive and presentational communication. Spanish countries and cultures will be explored through the use of authentic materials and unit themes. The course will explore the use of different Spanish registers with an emphasis on academic and formal settings.

Course 621 HONORS SPANISH II (Level 1)

Requirements: Students who take this course must have a B- or better in Honors Spanish I (Course 611) or an A- or better average in Spanish I (Course 612) and an A on the Midterm and Final. Expanding on the foundations of Spanish I, students will continue to build their proficiency in the areas of reading, writing, speaking and listening. Extensive and intensive vocabulary and grammar is emphasized, developed and mastered. The goal of the course is to communicate more effectively and in a more sophisticated way in both oral and written Spanish as well as to gain a more in-depth understanding from throughout the Spanish-speaking world.

Course 622 SPANISH II (Level 2)

Requirements: Students must have a C or better average in Spanish I. Spanish II builds on the grammar, vocabulary, listening, reading and speaking skills developed in Spanish I. The course introduces more complex grammatical structures and emphasizes greater oral proficiency. The goal of the course is to communicate effectively at more advanced levels and to gain a more in-depth understanding of Hispanic and Latino cultures.

Course 623 SPANISH II (Level 3)

This course is for students who need to review the basic grammar skills and vocabulary presented in Spanish I. Students in this course will then go on to more advanced grammatical patterns and sentence structures. Students will continue to work on oral and reading comprehension as well as improving their conversational and writing skills.

Course 626 HONORS SPANISH FOR HERITAGE SPEAKER II (Level 1)

Requirements: Successful completion of Spanish for Heritage Speaker I (level 1) or demonstrated linguistic proficiency through scores on linguistic proficiency exam. This course is open to all students who meet required linguistic proficiency regardless of racial or ethnic background. In this course, students will continue to build their literacy, listening, writing and speaking skills through exploration of Hispanic culture presented in theme-based units. Film, novels, debates, essay writing and other activities will focus on building students' critical thinking skills for writing and oral communication in academic and professional settings.

Course 631 HONORS SPANISH III (Level 1)

Requirements: Students who take this course must have a B- or better average in Honors Spanish II (Course 621) or an A- or better average in Spanish II (Course 622) and an A on the Midterm and Final. This course concentrates on the development of advanced speaking, writing, reading and listening skills as a preparation to take AP Spanish the following year. The course will focus on intensive communicative skills, both oral and written through exposure to literary works and current events. The course is taught primarily in Spanish.

Course 632 SPANISH III (Level 2)

Requirements: Students who take this course must have a C+ or better average in Spanish II (622). While this course is taught primarily in Spanish, the aim is to develop practical speaking, writing, listening and reading skills. A more extensive vocabulary is developed and grammar mastery is stressed. Students will continue to work on oral and reading comprehension as well as improving their conversational and writing skills.

Course 633 SPANISH III/APPLICATIONS OF SPANISH (Level 3)

Requirements: Students who take this course must have a C- or better average in Spanish II (623). This course provides an intensive review of the basic grammar and vocabulary from Spanish I and II. Students will continue to develop practical speaking, writing, reading and listening skills.

Course 641 HONORS SPANISH IV-CINEMA, CULTURE AND CONVERSATION (Level 1)

Requirements: This course is open to students who received the grade of C+ or better in Honors Spanish III (631) or A- or better in Spanish III (632). This course will be conducted in Spanish and will allow students to continue to build on their proficiency in the language while exploring literature, cinema, and current events in the target language and cultures. Emphasis will be placed on oral and written communication with an intense review of grammatical structures.

Course 642 SPANISH IV - CINEMA, CULTURE AND CONVERSATION (Level 2)

Requirements: Students who take this course must have a C- or better average in Honors Spanish III (631) or a C+ or better average in Spanish III (632). This course is conducted in Spanish and provides the student with an intense study of the skills necessary to build fluency in the target language. A review of grammatical structures will enable the student to further their Spanish reading comprehension.

Course 646 ADVANCED PLACEMENT SPANISH LANGUAGE (Level A.P.)

Requirements: Students applying for this course must have a B+ or better average in Honors Spanish III (Course 631) or Honors Spanish IV (Course 641). Admission to this course requires the timely and successful completion of a summer assignment. This college level course prepares the student to take the Advanced Placement Exam in Spanish Language. In-depth work is done in the area of speaking, reading and writing. This intensified study of Spanish stresses auditory and reading comprehension.

Course 647 ADVANCED PLACEMENT SPANISH LITERATURE (Level A.P.)

Requirements: Students who take this course must have a B- or better average in A.P. Spanish Language (Course 646). Admission to this course requires the timely and successful completion of a summer assignment. This college level course prepares the student to take the Advanced Placement Exam in Spanish Literature. The AP Spanish Literature course introduces students to the diverse literature written in Spanish and helps them reflect on the many voices and cultures included in Hispanic literature. The works selected for study will expose students to a wide variety of genres and types of discourse and will enable students to trace the history of Spanish prose from Don Juan Manuel to modern times.

Course 610 HONORS FRENCH I (Level 1)

Requirements: Students will be placed in this course based on their performance on a Central Catholic placement exam. In Honors French I students will study the language and culture of the French-speaking countries through listening, writing, reading and speaking activities. The course will begin with a review of basic, essential grammar and vocabulary, and then move to introducing more advanced grammar, vocabulary, and communication skills. The goal of this course is to give students a strong foundation in the language and to gain an understanding of different cultures.

Course 614 FRENCH I (Level 2)

In French I students will be introduced to the language and culture of the French-speaking countries through listening, writing, reading and speaking activities. Grammar and vocabulary will be extensively emphasized. The goal of this course is to have students communicate effectively at basic levels and to gain an understanding of cultures in *le monde francophone*.

Course 625 HONORS FRENCH II (Level 1)

*Requirements: Students who take this course must have a C+ or better in Honors French I (Course 610) or an A- or better average in French I (Course 614). Expanding on the foundations of French I, students will continue to build their proficiency in the areas of reading, writing, speaking and listening. Extensive and intensive vocabulary and grammar is emphasized, developed and mastered. The goal of the course is to communicate more effectively and in a more sophisticated way in both oral and written French as well as to gain a more in-depth understanding of cultures in *le monde francophone*.*

Course 624 FRENCH II (Level 2)

French II builds on the grammar, vocabulary, listening, reading and speaking skills developed in French I. The course introduces more complex grammatical structures and emphasizes greater oral proficiency. The goal of the course is to communicate effectively at more advanced levels and to gain a more in-depth understanding of cultures in *le monde francophone*.

Course 634 HONORS FRENCH III (Level 1)

Requirements: Students who take this course must have a C+ or better average in Honors French II (Course 625) or an A- or better average in French II (Course 624). Honors French III is an interactive course that incorporates familiar language with key new grammar points and cultural themes. Students will delve deeper into French culture through theme-based discussions and readings, film, music, and research. Students will be able to understand the language and communicate effectively in a variety of contexts. The class focuses on themes and communication in order to expand students' knowledge of the language and francophone world.

Course 635 FRENCH III (Level 2)

Requirements: Students applying for this course must have a C- or better average in French II. While this course is taught primarily in French, the aim is to develop practical speaking, writing, reading and listening skills. Students will also further their knowledge of Francophone cultures around the world.

Course 644 FRENCH IV CONVERSATION (Level 2)

Requirements: Students applying for this course must have a C+ or better average in French III. The course is conducted in French and provides the student with an in-depth and intensified study of the skill of speaking French. . Though emphasis is placed on speaking and communication skills in French, students will review grammatical structures, continue to develop their writing, and read from a number of literary selections. Students' cultural knowledge is expanded.

Course 648 ADVANCED PLACEMENT FRENCH LANGUAGE (Level A.P.)

*Requirements: Students applying for this course must have a B or better average in Honors French III (Course 634) or an A or better in French IV Conversation (Course 644). Admission to this course requires the timely and successful completion of a summer assignment. The ultimate goal of the course is for students to improve their linguistic proficiency in the four main skills of French language (speaking, listening, writing and reading) while exploring the cultural diversity of *le monde francophone*. Building on and expanding what they already know, students will communicate in written and oral French as spontaneously as possible. Grammar is learned and reviewed in order that student can speak correctly and convincingly. Vocabulary is expanded in order that students can communicate in an increasingly sophisticated way. This college level course prepares the student to take the Advanced Placement Exam in French Language.*

Virtual High School Courses- World Languages

The courses below are offered through the Virtual High School Collaborative. See "General Information" for more info. Individual classes may have requirements that are not listed below.

VHS Course 062- GERMAN LANGUAGE & CULTURE (Level 2)

One Semester. Are you curious about or drawn to the German language and culture? Would you like to learn a little bit of the language and explore the country with other students from around the world? In this introductory course, you will learn some basic language skills and be introduced to both contemporary and historical German culture.

VHS Course 064- ITALIAN LANGUAGE & CULTURE (Level 2)

One Semester. This course is fifteen week introduction to the basics of Italian language and culture. The Italian people are passionate, expressive, and creative. Through history they have contributed to art and new thinking. During this course, students will study the language while learning about the people who speak it, their history, their interests and pastimes. Participants learn simple expressions to help introduce oneself, talk about likes and dislikes, family, order food, haggle with the open market vendors, take a train, and shop. Students will discover the beauty of Italian cities through video, listen to Italian nursery rhymes and pop music.

VHS Course 061- PORTUGUESE I (Level 2)

Full Year. The primary goal of this course is to engage you in the real world challenge of getting acquainted with the Portuguese language and culture and, therefore, to develop the abilities to communicate and to think in Portuguese. Our practice with the Portuguese language will mainly involve skills of listening and speaking, but also reading and writing. Introductory knowledge of the Portuguese people, language and culture will certainly be a focal point in this course. We will also explore Portuguese language and cultural influence throughout the world, while instilling attitudes such as those of curiosity and respect for the convictions of others.

VHS Course 063- RUSSIAN LANGUAGE & CULTURE (Level 2)

One Semester. This course is a 15-week-long journey across the globe and time to learn the basics of Russian language and culture. We will be learning survival Russian: from simple greetings and introductions to the ability to sustain a simple conversation in certain situations. Knowledge of Russian culture and its traditions will help you not only communicate better in Russian, but also avoid cultural misunderstandings. We will explore the culture, past and present: art, music, literature, traditions, holidays, history, and the people. We will tour the Hermitage State Museum in St. Petersburg and listen to Russian songs, plan an imaginary trip around the country and watch Mariinsky Theater Ballet performances, enjoy Russian rock and watch excerpts from Russian movies and cartoons.

BUSINESS & TECHNOLOGY

Course 762 ACCOUNTING I (Level 2)

In this course students gain an understanding of the accounting cycle including the reconciliation of statements, preparation of financial statements, checking accounts, Federal tax returns, payroll systems, sales tax, and the formation of corporations. Students will gain practical experience through a simulated business project.

Course 760 ACCOUNTING II (Level 2)

Requirements: Students must have taken Accounting I. Students expand their knowledge of business procedures by examining current accounting practices in partnerships, purchase and sales, inventory, payroll, corporations, and the planning and analysis of financial statements. Students will gain practical experience through two simulated business projects. Students will gain practical experience through a simulated business project.

Course 765 BUSINESS LAW (Level 2)

Requirements: Open to juniors and seniors, this one semester course must be taken in conjunction with Marketing (Course 766). Students will examine the relationship of law to the citizen, the minor, the consumer and the business community. An overview of law enforcement, contracts, personal property, warranties, employment practices, liability and torts is provided.

Course 766 MARKETING (Level 2)

Requirements: Open to juniors and seniors, this one semester course must be taken in conjunction with Business Law (Course 765) or Investments 101: Stocks, Bonds, and Mutual Funds (Course 767). Students will be provided with a general overview of marketing practices. Major areas of study include: pricing, advertising, sales, research, production and distribution strategies.

Course 767 INVESTMENTS 101: STOCKS, BONDS, AND MUTUAL FUNDS (Level 2)

Requirements: Open to juniors and seniors, this one semester course must be taken in conjunction with Marketing (Course 766.) Investments 101 explores the application of various financial instruments in investment management. Students will be introduced to the process of deciding when to buy, hold, or sell a common stock and techniques of portfolio performance evaluation. Topics will include bonds, mutual funds, dividends, diversification, and learning how to read and interpret statistical data. Students will participate in a simulated stock market competition to gain practical experience.

Course 700 ADVANCED PLACEMENT ECONOMICS: MACRO AND MICRO (Level AP)

Requirements: Open to juniors and seniors. Students must have successfully completed Algebra II. Students who enroll in this course will be required to take the AP Macroeconomics and/or AP Microeconomics exams in May. Economics is the social science concerning how society distributes limited resources. Students will explore the general theories of economics and apply them to microeconomic analysis (dealing with individual decision makers, both producers and consumers) and macroeconomic analysis (dealing with the economic system as a whole).

Course 771 HONORS INTRODUCTION TO PERSONAL FINANCE (Level 1)

OFFERED FOR DUAL ENROLLMENT WITH SYRACUSE UNIVERSITY Information about the dual enrollment program can be found on the website under "Academics", "Course Catalogue", "Dual Enrollment".

Honors Introduction to Personal Finance is a three-credit Syracuse University Project Advance course that covers essential aspects of consumer personal finance, including record keeping, budgeting, banking, saving, borrowing, investing, insurance, taxes, and retirement planning. The goal is to combine coverage of the important institutional coverage involved with financial planning, taxes, saving, investing, loans of different types, managing credit, and retirement planning with underlying fundamental concepts and issues. Therefore not only will students be able to make more informed personal finance decisions over their lifetimes, the conceptual basis will help them to better handle a constantly changing financial world. The course is rigorous but not overly mathematical. This is a college course offered through Syracuse University, and students paying the (discounted) fee for SU credit will receive a Syracuse University transcript.

Course 701 PRINCIPLES & TOPICS IN COMPUTER SCIENCE (Level 2)

Requirements: This course must be taken by all incoming freshmen beginning with the Class of 2022. In a blended learning environment, this project-based course will provide students with an opportunity to explore the different facets of computer science and the impact technology has in today's world while developing proficiency in software applications and iPad apps. This course will meet once over the summer for training and then both face-to face and online during the first semester of freshman year, with the majority of the students' work done online outside of class time. Students will develop critical thinking and problem-solving skills by working both individually and in groups on projects throughout the semester. Potential topics explored include digital ethics, effects of screen time, and careers in technology, digital forensics, cyber security, artificial intelligence (ai), animation and programming. At the completion of the course, students will have developed a digital portfolio demonstrating the understanding of topics as well as proficiency in applications. This one semester blended learning course is instructor-led and provides students with an asynchronous learning environment.

Course 716 & Course 726 PROBLEM SOLVING WITH PROGRAMMING (Level 2)

Requirements: This one-semester course must be taken by students in their freshman or sophomore year beginning with the Class of 2021. Problem solving and critical thinking skills are increasingly important in today's college and working environment. This course offers students an opportunity to develop problem solving and critical thinking skills while learning how to code. Starting with block-style coding, then transitioning to traditional event driven programming, students will master the process of defining a problem, breaking it down into a series of smaller problems, and finally writing a computer program.

Course 702 HONORS VIDEO GAME DESIGN I (Level 1)

Requirements: Demonstrated proficiency in placement test. This one semester course is intended to offer an Honors Level alternative to Course 716 or 726. This course will explore common, real-world applications of computer programming through the creation of graphical video games in *Gamemaker Studio*. The development of problem solving skills and an understanding of important algorithms in computer science are central to the course. Students will also learn about the fundamental aspects of game design, implementation, and testing. Additionally, the societal impact of video games and implications and uses of gamification in modern society will be explored.

Course 755 MODELING IN 3D (Level 2)

Requirements: Open to juniors or seniors. Interested in architecture, engineering or 3D design? This course introduces students to the Elements of Art and the Principles of Design as they apply to three-dimensional works of art. Students will begin to explore a variety of 3D design materials and techniques as well as Google SketchUp, a 3D modeling application that allows students to create geometric models and renderings such as buildings and interior design objects. Upon completion of this course students will be able to create and display three-dimensional artworks as well as digitally designed three-dimensional environments.

Course 745 HONORS VIDEO GAME DESIGN II (Level 1)

Requirements: B or better in Algebra I and Geometry and permission from instructor. This year-long course is intended to allow students with varying levels of programming experience to explore common, real-world applications of computer programming through the creation of graphical video games in *Gamemaker Studio*. The development of problem solving skills and an understanding of important algorithms in computer science are central to the course. Students will also learn about the fundamental aspects of game design, implementation, and testing. Additionally, the societal impact of video games and implications and uses of gamification in modern society will be explored.

Course 730 ADVANCED PLACEMENT COMPUTER SCIENCE PRINCIPLES (Level AP)

Requirements: This course requires the successful completion of Algebra I. AP Computer Science Principles introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. With a unique focus on creative problem solving and real-world applications, AP Computer Science Principles prepares students for college and career. This course is organized around the investigation of several fundamental principles essential to thrive in future college courses and a variety of computing and STEM (science, technology, engineering, mathematics) careers. Emphasizing these key big ideas helps students build a solid understanding and facility with computing and computational thinking. These integral understandings can be applied in further studies of computer science and provide a pathway for becoming a well-educated and informed citizen who understands how computer science impacts people and society.

Course 740 ADVANCED PLACEMENT COMPUTER SCIENCE A (Level AP)

Requirements: A minimum of a B+ or better in Algebra II & Trig. (Course 332). This course also requires approval of the instructor. This course emphasizes programming methodology with an emphasis on problem solving and algorithm, using the Java programming language. It also includes the study of data structures and abstraction. The goal of this course is to prepare students to take the AP Computer Science A exam.

Virtual High School Courses- Business & Technology

The courses below are offered through the Virtual High School Collaborative. See "General Information" for more info. Individual classes may have requirements that are not listed below.

VHS Course 047- COMPUTATIONAL SCIENCE AND ENGINEERING USING JAVA (Level 1)

One Semester. Requirements: Two years of algebra, one year of geometry, one year of a laboratory science. This course is designed as a first course in programming for science and engineering. This course is an introduction to computational science, an interdisciplinary method of scientific inquiry. Students will develop a working knowledge of Java, the most important new computer language to arise in the last decade. Students will also gain experience with the fundamental ideas of calculus and its application in science and engineering. The emphasis of the course is scientific programming, and not simply learning Java. The Java language is used as a tool in building mathematical models that are of interest to scientists and engineers.

VHS Course 076- INTERNATIONAL BUSINESS (Level 2)

One Semester. This course will provide the foundation for becoming well informed about International Business. It gives you an introduction to international business activities and the economic, cultural, and political factors that affect International Business. Business structure and management, trade, global entrepreneurship, marketing, and career planning will be studied. Throughout the course you will use your creativity as well as your new International Business skills to develop the framework for a fictitious company that sells its products around the world.

VHS Course 079- WEB DESIGN (Level 2)

One Semester. Web Design introduces students to the raw materials of web content and the design techniques that create effective web communication and interaction. The three primary web languages, HTML, CSS, and Javascript, form the raw materials; web standards from the W3C help shape design techniques for media creation, navigation, and interactivity.

Courses 812, 813, and 828 AN INTRODUCTION TO THEATER ARTS (Level 2)

This course will fulfill the Fine and Performing Arts requirement. (One Semester) This one-semester course introduces students to basic performance techniques through exercises in improvisation, 10-minute plays, and voice and diction. Students will also analyze dramatic structure, comedy versus tragedy, and theater history through textbook reading, examples from popular plays, musical, sitcoms, and movies, and a hands-on application of the performance techniques. Through a broad study of theater, students have the opportunity to develop skills in ensemble building, trust, self-confidence, focus, imagination and creativity.

Courses 810, 811, and 820 AN INTRODUCTION TO VISUAL ART (Level 2)

This course will fulfill the Fine & Performing Arts requirement. (One Semester) This course is open to students of all artistic levels. Through a variety of exercises and projects, emphasis will be placed on gaining a working knowledge of the basic Elements of Art and Principles of Design. This course integrates conceptual projects intended to enrich individual student's identity and perspectives on their environments. Through an overview of artistic movements and aesthetics students will gain a deeper understanding of the role art plays in our world and be able to utilize this knowledge in the creation of their own work. There will also be emphasis on how the arts encourage and develop critical thinking and creativity in all areas of life.

Courses 814, 815, and 824 INTRODUCTON TO KEYBOARDING AND MUSIC THEORY (Level 2)

This course will fulfill the Fine & Performing Arts requirement. (One Semester) This course is intended for a beginner musician or musicians with minimal knowledge of music theory. This program gives students the opportunity to play a musical instrument and learn the fundamentals of reading music. In learning the basics of music theory, students will be able to apply this knowledge directly to the piano. The class will cover topics such as pitch, rhythm, and scales and will allow students to play familiar songs and melodies. By the end of the semester, students will be able to play individually with the possibility of group performances.

Course 822 VISUAL ART II (Level 2)

This one-semester course is open to sophomores who completed either course 810 or 811 and are enrolled in Geometry (Course 323). Grading will be based upon the student's degree of effort and their willingness to explore new ideas. Course materials will build upon prior knowledge of the Elements of Art and the Principles of Design. Students will be challenged to work independently, explore different perspectives within visual meaning while making and recognizing the importance of intention and experimentation. The range of assignments will allow students to investigate materials and unconventional processes, gain an understanding of alternative perspectives, and develop skills to deconstruct visual culture.

Course 863 MUSIC THEORY II - GUITAR (Level 2)

Requirements: The class is offered to students who earned an A or B in Introduction to Music Theory and Keyboarding or students who receive special permission from the music teacher. This one semester course builds on the principles established in Introduction to Music Theory and Keyboarding, Music Theory 2: Guitar is an intermediate music theory course designed to apply music theory concepts to the guitar and learn many different styles and techniques of guitar playing. Units would include both playing and writing music.

Course 873 DEVISED THEATER WORKSHOP (Level 2)

This one semester course is designed for eager, committed students of theater who will function simultaneously as performer, author, choreographer, and designer to devise (or create) a brand new piece of theater. The class begins without a script which eventually develops as the rehearsal process takes place. Through a series of improvisations, collaborations, games and other conceptual ice-breakers, students realize the kinds of stories they'd like to tell and the way they'd like to tell them. Over the course of the semester, a text emerges, one covered with the fingerprints of each and every participant.

Course 842 COMPOSITION AND PHOTOGRAPHY (Level 2)

This course is open to juniors and seniors. A fee of \$150.00 for materials is associated with this course. No previous photographic experience is necessary for this course. Film cameras are provided for students to use and most of the photography used is NOT digital. This is an introductory course focused on the study of black and white darkroom techniques and the Elements of Art and Principles of Design. Materials beyond film photography will be explored. Students will develop creative thinking and analytical skills necessary for creating aesthetically successful photographs. Emphasis will be placed on developing technical skill through exploratory assignments, references to historical and contemporary uses of photography, lessons on current photographers and experimentation with materials and techniques. Students are encouraged to develop artistic habits and strive for portfolio quality pieces.

Course 843 SCULPTURE (Level 2)

This course is open to juniors and seniors. A fee of \$150.00 for materials is associated with this course. Course materials will focus on knowledge and understanding of the Elements of Art and the Principles of Design as they apply to three dimensional works of art. Students will be challenged to work independently, explore different perspectives within visual meaning making and recognize the importance of intention and experimentation. Students will begin to explore a variety of 3D design materials and techniques including but not limited to: paper mâché, plaster, weaving, sewing, carving and other assemblage processes. This study of art will include contemporary artist research assignments and grading will be based upon the student's degree of effort and their willingness to explore new ideas.

Course 755 MODELING IN 3D (Level 2)

Requirements: Open to juniors or seniors. Interested in architecture, engineering or 3D design? This course introduces students to the Elements of Art and the Principles of Design as they apply to three-dimensional works of art. Students will begin to explore a variety of 3D design materials and techniques as well as Google SketchUp, a 3D modeling application that allows students to create geometric models and renderings such as buildings and interior design objects. Upon completion of this course students will be able to create and display three-dimensional artworks as well as digitally designed three-dimensional environments.

Course 853 DRAWING/PAINTING I (Level 2)

This course is open to juniors and seniors. A fee of \$150.00 is associated with this course. This course integrates college level studio art practices with a curriculum designed to encompass and promote the interests and identity of the student. Within the first semester, students will focus on basic skills of drawing and painting. In the second semester of the course students will have the opportunity to explore making art that is based upon personal/conceptual ideas and utilize the technical skills from first semester. A review of the Elements and Principles of Design will be included throughout the year within the context of Contemporary Art. Student work will include and be assessed through conceptual, cognitive and creative processes. Students will be encouraged to develop artistic habits and strive for portfolio quality pieces. An extra hour of Studio time (once a week) will be provided after school for those interested in using the facilities and the guidance of the instructor.

Course 851 ADVANCED PLACEMENT STUDIO ART (Level AP)

This course is open to juniors and seniors. A fee of \$150.00 for materials is associated with this course. Admission into this course is based on completion of the summer assignment and a teacher review of recent and original artwork completed by the applicant. Students enrolling in AP Studio Art must attend a summer art course that is pre-approved by instructor. Timely and satisfactory completion of summer work and correspondence with instructor is also required. This intensive and demanding course is best suited for those students who are highly motivated and committed to developing their interests in visual art. This course integrates college level studio art practices with a curriculum designed to encompass and promote the interests and identity of the student. This study of art will include contemporary artist research assignments and grading will be based upon the student's degree of effort, willingness to explore new ideas, ability to complete work in a timely fashion. Students must follow the AP College Board guidelines for either a 2D design, 3D design or Drawing portfolio and submit all required materials by the official due date set by the College Board in order to successfully complete this course.

Course 880 ADVANCED PLACEMENT MUSIC THEORY (Level AP)

Requirements: Students who apply for this course must have taken a previous Music Theory course, taken private lessons outside of school and/or participated in a school music ensemble. Admission to this course requires teacher approval and the timely and successful completion of a summer assignment. Advanced Placement Music Theory builds upon basic theory knowledge acquired in Introduction to Keyboarding/Music Theory, Band, Orchestra or Chorus. This is a rigorous music theory course that explores not only the fundamental elements of music, but the structural and compositional elements of music. Students will advance their understanding of music through harmonic analysis and composition while developing aural skills through sight singing, melodic and harmonic dictations. This course prepares students for the Advanced Placement Music Theory exam.

Course 870 ACTORS IN ACTION (Level 2)

This two semester course is intended for students interested in theater performance, competition, and college or professional auditions. Focusing on acting techniques, monologue and scene competition techniques, students will participate in the New England Theater Conference in October, and the Massachusetts Educational Theater Guild Festival in March. Students will be able to analyze and assess American plays and musicals, perform monologues, scenes, and staged readings. Students will be cast in Central Catholic's METG festival entry. This course will prepare students to audition for college scholarships, entrance into college theater programs, and professional theater organizations. Students will create a headshot and resume upon completion of this course.

Course 890 BAND (Level 2)

This course is open to all students and will be offered three days a week (Mondays, Thursdays, and Fridays from 7:00-7:55 a.m.). Students who enroll in and successfully complete the course will be awarded .5 academic credits. A special sign-up process is required for this course. Led by a professional musician and experienced band director, the concert, jazz, and pep bands at CCHS invite students of all musical abilities to participate in the program. Students will be graded on attendance, occasional playing tests, rehearsal participation, and self-critiques. The bands perform at two concerts during the school year, as well as home football games and graduation. Subsidies are available for the rental of instruments.

Course 903 CONCERT CHOIR (Level 2)

This course is open to all students and will be offered after school one day a week, for two hours. Students who enroll in and successfully complete the course will be awarded .5 academic credits. A special sign-up process is required for this course. Led by a professional musician and experienced chorus director, the concert choir teaches well-rounded musicianship skills including music theory, sight-singing, healthy vocal technique, and a repertoire that encompasses music in various languages from a range of genres, time periods, and geographical locations. The concert choir presents two concerts during the school year.

Course 872 YEARBOOK (Level 2)

This course is open to all students and will be offered two days a week (Tuesdays and Thursdays from 7:00-7:55 AM). Students who enroll in and successfully complete the course will be awarded .5 academic credits. Students enrolled in this class will be responsible for designing and producing The Florentian, Central Catholic's yearbook. Students will use Josten's online yearbook program to plan and create spreads to document student life throughout the year, using image and text to chronicle special events, clubs & activities and athletics. Other responsibilities will include conducting interviews, gathering data, writing articles, meeting deadlines and working as a team to produce a cohesive book with a unifying theme. Students will be expected to go to school events and work as a photographer representing Central Catholic, as well as one afternoon meeting each month with the publishing company representative.

Virtual High School Courses- Fine & Performing Arts

The courses below are offered through the Virtual High School Collaborative. See "General Information" for more info. Individual classes may have requirements that are not listed below.

VHS Course 080- AP ART HISTORY (Level AP)

Full Year. Students will acquire a comprehensive knowledge of historically significant artists, movements, aesthetic theories and practices, ranging from the prehistoric times to the significant contributions in the 21st Century. Art production of all cultures will be studied in relative proportion to their representation on the Art History Advanced Placement Exam. Students will see the development of trends, movements and events in art, how they reflected and affected the times in which they occurred, gaining insight into typically misunderstood topics pertaining to the visual arts. Students will research and write knowledgeably on a number of art history topics, reflecting and synthesizing their own theories on the many works they will see in virtual museums and collections. They will be expected through carefully structured assignments, to exhibit an extensive scholarship in conjunction with these experiences.

VHS Course 014- ART HISTORY (Level 1)

One Semester. This course is designed to emulate a college level 'survey' course in Art History. Study begins with the Renaissance in Western Europe, because 1500 was an important moment for Western culture, and finishes off the second half of the millennium. We'll visit museums all over the world, virtually of course, and look at the connections among various types of art that have been created for the past 500 years. This course is a great way to expand your understanding of history as well as your understanding and love of visual art. If you like looking at works of art and wondering what on earth the artist was trying to communicate, this is the course for you.

VHS Course 083- HISTORY OF PHOTOGRAPHY (Level 1)

One Semester. This course will explore the use of photography as a record of visual history - not just the use of photography for documentation, but also as a reflection of technological developments, social trends, and as a means of personal expression. Students will examine the works of famous photographers, from its beginnings in the 19th century to contemporary times, and will develop an aesthetic vocabulary. In addition, they will have opportunities to exchange ideas and explore subject matter through class discussion forums and team work. They will also create studio assignments in order to gain an appreciation for how photography can be used as a means of personal expression.

VHS Course 082- MUSIC LISTENING AND CRITIQUE (Level 2) *One Semester.* Music Listening and Critique is a fifteen-week course that will take you into the world of a music as a listener and writer. You will explore how to listen to music, how to write about what you are hearing and how to analyze and appreciate different styles of music. You and your classmates will have the opportunity to listen to a wide variety of music from four stylistic areas – World Music, Jazz, Classical and Popular Music. You will be listening to many examples weekly that are stored for you in the Listening Library. You will compare and contrast the different styles with your classmates in discussions and formal essays.

Course 910 HEALTH 1 (Level 2)

Health education is a required one semester course for freshmen. In Health 1 the emphasis will be on the uniqueness and importance of each individual. Topics to be covered will include bullying, values and behavior, mental health and wellness, and eating disorders. The goals of the course are: to guide the behavioral momentum of the student towards a healthy and productive life and to provide instruction and strategies to help the student evaluate information so that responsible choices can be made.

Course 914 PHYSICAL EDUCATION FOR FRESHMEN (Level 4)

Physical education is a required one semester course for all freshmen. Freshmen participate in numerous team building activities and are introduced to basic skills development in different team sports. Freshmen participate in the Project Adventure curriculum and team sports/activities which emphasizes teamwork and problem solving skills.

Course 922 HEALTH 2 (Level 2)

Health education is a required one semester course for sophomores. In Health 2 the emphasis will be on making proper lifestyle choices. Topics to be covered will include bullying, the dangers of alcohol, tobacco and drugs and the importance of proper health, fitness and nutrition. The goals of the course are: to guide the behavioral momentum of the student towards a healthy and productive life and to provide instruction and strategies to help the student evaluate information so that responsible choices can be made.

Course 924 PHYSICAL EDUCATION FOR SOPHOMORES (Level 4)

Physical education is required one semester course for all sophomores. Sophomores participate in a curriculum which allows them to experience a variety of cardiovascular and fitness related activities. Activities will concentrate on the development of cardiovascular fitness, strength and flexibility.

Course 931 PHYSICAL EDUCATION: CPR and First Aid (Level 4)

An elective, one-semester course, this class will meet 2 days per seven-day cycle. Optional: Students who wish to receive Red Cross certification must pass the exams and pay a \$28.00 fee for each certification (CPR and First Aid). Central Catholic's commitment to the health and wellness of its community is reinforced by this course in Cardiopulmonary Resuscitation (CPR) and Basic First Aid. Students must pass the course and final exams to receive their 0.25 credit in physical education.

Course 935 PHYSICAL EDUCATION : Sports for Life (Level 4)

An elective one-semester course, this class will meet 2 days per seven-day cycle. This course is designed to teach students basic skills in sports and activities such as basketball, tennis, golf, volleyball, and softball that they can participate in beyond the academic setting. In addition to participating in these activities, students will be instructed in the rules and regulations of these sports and will be required to officiate during some class periods. Students will also explore strength training and learn skills involved in rock climbing, both as a participant and as a spotter.

Course 945 PHYSICAL EDUCATION : Strength & Fitness for Life (Level 4)

An elective one-semester course, this class will meet 2 days per seven-day cycle. This course is designed for students that want to improve their overall strength and fitness through basic application of muscular strength and endurance training. Students will learn how to apply measurable goals, fitness logs, appropriate nutrition, personal fitness plans, and knowledge of proper technique to become more successful athletes and lifelong physically active people. The course is designed to guide and improve any student who is looking to achieve and maintain a health enhancing level of physical fitness.